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ORIGINAL DEPARTMENT.

COMMUNICATIONS.

CENTRAL AMERICAN MEDICAL CURIOSITIES COLLECTED FOR THE MEDICAL AND SURGICAL REPORTER.

BY FERD. C. VALENTINE, M. D.,

Of New York.

(See pp. 397 and 617.)

Toads have a more extended application. The live animal is slit open along its ventral surface and is lightly passed over erysipelatous parts, which treatment is said to cause the disease to abort immediately "by absorbing the hot blood of the patient, and giving him the toad's cold juice in exchange." My informant blissfully asserted that the same treatment would cure cancer—he had never heard of condurango.

Powdered willow-bark, two drachms a day, is said to cure quartan intermittents, and an anti-gangrenous poultice is made of equal parts of the powder and ground rue (*Ruta, L.*) made into a pasty consistency with aguardiente, vinegar and liquidamber, also in equal parts.

Elder flowers (*Sambucus*) in infusion are presented in catarrhal, eruptive and rheumatic affections. The flowers are mixed with bran in equal parts, and tied upon erysipelatous parts. The flower is soaked in white wine, "which then will give the drinker a sweet voice," and the leaves applied to the breasts are said to arrest the secretion of milk.

Cow's tallow melted and mixed with warm water is drunk to relieve old pyrosis. Lavender, cinnamon and copalchi, in powder, are added, and the resultant mixture is applied externally to

painful joints. In dysentery, a drink is given *ad libitum* composed of mutton tallow, ten ounces, and cow's milk, eight ounces, which are boiled together over a slow fire, and continuously stirred from left to right. Subsequently, a teaspoonful each of starch and sugar are added, and the whole boiled again.

Rosemary is employed in infantile convulsions and epilepsy, and externally as a cosmetic and to intensify visual power.

Infusion of red roses, and oil of red roses, the latter made by adding two ounces of the leaves, which have been dried in the shade, to a pint and a half of fresh salad oil, which, in a well-stoppered bottle, is boiled in water for two hours, are used in slight burns and superficial inflammations.

Decoction of white rose is an excellent purge for children *when given with manna.* (!)

Rue is the cardinal remedy for all nervous affections, especially hysteria and epilepsy. It strengthens the sight, "dissolves pannis" (the fresh sap is squirted upon the opened eye every morning) and is a vermicide. Some mothers give 20 grains of the powder every morning to their daughters, because, "with prayers and fasting it temporarily quiets the sexual desires, facilitates menstruation, and will make future parturition easy."

A favorite hysteric potion is made of three tablespoonfuls of fresh ruta-juice and six of infusion of orange leaves, of which a tablespoonful is given every hour.

A paste for common intermittent is composed of half an ounce each of ground rue and mustard, to which a sufficiency of water is added, and the wrists and soles are besmeared with the mass at

the inception of the chill. I have frequently witnessed this application, and can assure my readers in all gravity and candor that it never had any effect further than to please the patients' grandmothers, which, however, is frequently not an unimportant element to professional success.

Modern medicine and elegant pharmacy are doing their iconoclastic work with the granny-doctors of Central America, and although they progress somewhat slowly, it is safe to say that another generation will relegate much of the "nasty" of to-day to the *panteón*, and R. I. P. will be written over it.

Having thus relieved myself, I shall return to the rue, the leaves of which and those of anise, an ounce and a half each, are added to a quart of strong aguardiente. They are placed in a well-corked bottle and exposed to the sun for eight days. Two tablespoonfuls are given in half a glass of sweetened water before the chills come on, from which it will be correctly inferred that this tincture is a favorite prescription for intermittents. As in a majority of other instances, the "stomach of the patient must be thoroughly cleaned out before using this remedy"—and thoroughly cleaned out it is, if ipecac in almost unlimited quantities can do it.

I believe that there is in this world no more frugal people than the Central Americans, and at the same time no people more fond of vomiting. I know of a case in San José de Guatemala, a carpenter who fell from a house and sustained a compound comminuted fracture of the femur. The surgeon of the local garrison was called, and previous to examining the patient gave him 40 grains of ipecac. The North American stomach repudiated the dose and the breakfast. The man is alive and well to-day, with very little shortening. When I asked the surgeon why he had given the ipecac, he told me, "to clean out the stomach and relax the muscles."

For the good repute of my colleagues, such as Pacheco, Alvarez, Cárdenas, Luna, Monteros, Fenner, Fernandez-Padilla, P. Molina-Flores, *et id omne genus*, I must explain that my friend above cited is by no means a type of the Central American physician, many of whom would attain a foremost rank in the profession, if they limited themselves to it.

Common salt, one to two ounces, in half a glass of warm water, is given as a purge. Intestinal worms are treated by giving patients strongly-salted food. Vinegar and salt is applied to bruises and inflamed swellings, and recently the use of a drachm of salt in half an ounce of brandy has

been recommended to be taken every morning in intermittents and phthisis. Salt fried in lard is applied to the swollen face which frequently accompanies odontalgia. Fomentations of hot salt-water are applied to painful joints. An anti-phthisical pill is made of common salt a drachm, toasted and ground acorns a drachm and a half each, conserve of roses a sufficiency. The mass is divided into forty pills. One is taken every hour for a month.

Nitrate of potassium, "refreshes and increases the urine, impedes putrefaction, and calms the ardor of the blood," meaning "restrains animal passions," for which purpose it is rarely taken. It is recommended in all inflammatory affections, variola, scarlatina, rheumatism, and in dropsy (3j. daily in barley water or beer). Stout women when pregnant, take cream tartar 3j. with the nitrate 3j. div. in chart. No. viii, one every three hours, to relieve toothaches and so forth, incidental to their condition.

Dragon's blood, with rose-water or plantain sap, is given in metrorrhagia and diarrhoea, two or three tablespoonfuls a day, or 12 to 24 grains of the powdered dragon's blood. It is also used in ulcerative stomatitis, as a mouth wash to cleanse and "fasten the teeth."

Tobacco is given internally in chronic catarrhs and dropsy. A decoction is injected to kill ascarides, and it is prescribed in asthma, apoplexy, paralysis and strangulated hernia. Externally it is used for tinea, itch, and is applied to ulcers which have become infested with maggots.

Tincture of tobacco is made by infusing two drachms of the leaves in four ounces of boiling water. They are left there for two days, then strained, and three tablespoonfuls of aguardiente are added to the liquid, the dose of which is 20 to 40 drops.

A cerate for herpes of all kinds is made of three ounces each of the juice of green tobacco, yellow wax, and turpentine, with a small quantity of oil. These are melted together and applied to the herpetic spots.

Headaches, neuralgias, and other painful affections, are treated topically with a tobacco leaf and oil. I would here write a eulogy of Honduranian tobacco, especially that of the district of Santa Rosa, if I did not fear the unappreciative editorial blue-pencil, which does not smoke. The sweetened infusion of fresh tamarinds is given in fevers, especially those of the bilious type. The decoction of the flowers is an excellent diaphoretic. The flesh of the fruit is spread upon soft leaves or rags, and applied to abscesses as a maturative.

Tamarinds are preserved by removing the seeds and adding two parts of sugar, and grinding the mass together. Stramonium "even in small doses causes madness and other disorders." It is an excitant and a narcotic, and is used to cure nervous rheumatism, convulsions, to quiet maniacs and to give them sleep." The dried leaves are smoked in asthmatic attacks; to facilitate their action the patient is advised to drink strong coffee while smoking. All local pains are treated by poultices of the mashed stramonium leaves. "Turtle-flesh should be given wives who do not love their husbands, as their genital appetite will be so stimulated that he will be welcome at all times. It also purifies the blood, and in erysipelas turtle-soup should be taken extensively, and the affected parts anointed with the turtle's blood."

This is an instance of the very common belief in aphrodisiacs, a subject which in all times has had great attractions for the popular mind, and on equally slim foundations.

Turpentine is used in chronic intestinal and bronchial catarrhs and in blennorrhagia.

The leaves of the tuna (sold here under the name of the "Mexican prickly pear") are applied upon any inflamed part, when the inflammation is not dependent upon traumatism. The gum of the plant is considered expectorant, and the red petals of the flower, ground and mixed with sugar, are given in old gonorrhœas.

The vanilla of Central America offers a chance to some physician whose passion for his profession is not so great that it precludes other occupation. It is larger and finer than the Mexican, but no one in Central America understands its preparation for the market. The specimens brought here are not sufficiently dry. The non-professional prescribers of Central America say it is nervine and analeptic, but too aphrodisiac to take carelessly. Perhaps that explains its extensive use. The tincture (1 to 10 of aguardiente) is given in 40 to 60-drop doses in wine.

"Deer meat prolongs life." The tallow melted in manzanilla water is given as a 'pectoral' at the conclusion of pneumonia, and it is also applied to abscesses. Filings of deer horns are given in wine to people infested with lice.

Portulacca is recommended as a diet in constipation, and the juice is said, by some physicians, to be entirely reliable in tape-worm. The dose is three tablespoonfuls every fifteen minutes, fasting. This is continued until the worm is expelled.

Peppermint is used as in other parts, but it is urged that at least every three years the plant

must be removed from the site of its growth, otherwise the leaves lose their medicinal virtues.

The horse-aloe is quite common in all of the hot coast-regions of Central America. Incisions are made into the leaves during the ascending quarter of the moon; from these incisions the thick sap flows which soon grows hard and is scraped off. It is used as a cathartic in dropsies, and is given to women with amenorrhœa. A watery saturated solution is employed as a wash for chronic ulcers, maggots, lice and bed-bugs. It is injected for intestinal worms and applied to gangrenes.

The mucilaginous sap of the leaves is used as a dressing in recent burns and erysipelas, and is efficaciously employed in acute urethritis, 9 tablespoonfuls of the fresh juice with the same quantity of milk drunk fasting. A popular iron and aloes pill is made of iron filings (q. v.), 100 grains to 40 of powdered aloes, with a sufficiency of thick mucilage. This mass is divided into 50 pills, and four to six of these are given daily to anæmic persons and to women said to suffer from metritis. I intentionally throw doubt upon the diagnosis, as physical exploration of the female genitalia is rarely allowed in the greater part of Central America, for a very sad reason, one which reflects horribly upon the profession, and I am glad to say that the implied charge is as unfounded as it is villainously unjust.

Tincture of aloes is composed of an ounce of the gum dissolved in a quart of aguardiente. Ten to twelve drops are taken in wine or water in the morning to "open the appetite and give strength to weak stomachs." (!) "This tincture must not be given to pregnant women, nor to persons who suffer from hemorrhoids, as it will make them worse."

A curious vermifuge ointment is made of cow's bile and powdered aloes, two drachms each to an ounce of lard. These are well rubbed together and anointed upon the umbilicus to kill intestinal worms and to assuage the colic-like pains produced by them.

Another infallible remedy for *nube*, i. e. all opacities of the cornea, from slight leucoma to the most dense pannus, is made of six grains of powdered aloes, thoroughly triturated with seventy-two grains of white sugar. The powder is blown through a quill upon the eye while the lids are opened. It is not necessary to comment upon this treatment.

Sarsaparilla, which abounds on the North (Atlantic) coast of Honduras and Guatemala, both of which are called in the market "Honduras Sar-

saparilla," and are known for their superiority, have as wide a medicinal application in Central America as the domain of pathology reaches. It is used in infusion and powdered and in all conceivable doses, by the lower classes, while those better situated prefer the foreign preparations, such as the fluid extract, tincture, and syrup.

Sassafras is considered diuretic, diaphoretic, and sedative. It is prescribed in syphilis, sterility, and rheumatism, in doses of a drachm daily in powder.

The Central American leeches are small, and do not extract more than three-quarters of a drachm of blood. They are not much used.

A few words now upon the general indications for treatment.

Enemas of cold water are administered for cephalalgia; of purgatives for their effect; of starch with laudanum to calm pain, and as an hypnotic; of decoction of quinia, or with sulphate of quinine in pernicious fevers; of malva with nitrate of potassism, for ardor urinae and retention of this excretion; of decoction of rue or artemisia in nervous or flatulent colic, and for rectal alimmentation.

Purgatives.—Drastics are forbidden in pregnancy, dysentery, hemorrhoids, or debility; but their use is urged in apoplexy, dropsy, and amenorrhœa. Laxatives are proper in dysentery and bilious diseases. Persons having taken a purge should limit their diet, "lest they produce dysentery, indigestion, and dropsy."

Sinapisms should not be prepared with vinegar nor aguardiente, as thus their virtue is destroyed. When a strong sinapism is required, only water is added to the ground mustard, and flour is added when a mild effect suffices. They are used on non-inflammatory painful parts, and they are applied to the nucha and the soles in dizziness and headache. If placed over enlarged spleen they reduce its size, and cause fevers to abort; upon the stomach, they materially help obstinate vomiting and diarrhœa.

Dry cups are applied over the stomach to relieve vomiting, and to the breasts and back to restrain uterine hemorrhage.

Emetics should head the list for the wonderful—I nearly said outrageous—frequency with which they are employed. "They are the most natural remedy: they promote perspiration and cause a healthy 'shaking up.' They are suitable in bitter taste and pestilential breath (literal translation), also to calm nervous diseases, rheumatism (of course) and dementia"—in brief, to all the ills that flesh is heir to, and which can be conjured

up by the imagination of people who have little to do. Yet it must be remembered that emetics "must not be given in gastritis, or when the tongue is red and dry, and when the patient is vomiting or very constipated. Nor are they suitable in pregnancy, during menstruation, nor when the patient has hernia, or apoplectic tendency."

In conclusion, let me repeat that this brief review of the non-professional *materia medica* Centro-Americana, though, perhaps, the foundation for a future scientific one, is by no means a fair picture by which to judge the brilliant practitioners of the larger cities. I present the list merely as a collection of curiosities, from which a great many really valuable ideas can be culled, and lay down my stylographic pen, which has inked me so far as my elbow, as I rest to conjure up a dream of Central America—of the delights of practice and life there. However, I shall not inflict more upon the editor, who has been already too indulgent with my senile garrulity; I will only ask him to permit me to add the proverb:

"De médico, poeta y loco
Todos tenemos un poco,"

which may be freely rendered—if the readers are not too exacting:

"In all men's and women's humanity
Are some medicine, rhyme, and insanity."

Which predominates? which should take precedence? And deponent further sayeth not.

SICK HEADACHE.

BY DAN'L B. D. BEAVER, M. D.,
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There appeared in the *MEDICAL AND SURGICAL REPORTER*, on the 29th of last July, an article from the pen of Dr. G. C. Savage, of Jackson, Tenn., upon "*Sick Headache: Its Causes Hypermetropia and Astigmatism, either alone or combined, and its cure, properly-fitting glasses*," which by reason of having found its way in to the lay press* demands more professional attention. So long as it remained in the medical journals, the author alone was responsible for its statements; but as soon as non-professional papers quoted and copied it for the public eye, the profession became sponsor, and will receive honor or dishonor according to its truthfulness. If Dr. Savage has actually "discovered the real cause and treatment of sick-headache, that opprobrium of medical art from the beginning down to the present time," as he claims, he has conferred a boon upon humanity, and indeed re-

* *Christian Advocate*, New York, Nov. 30, 1882.

moved the "opprobrium" of our art; but if his claim is not well founded, he has added one more to the ill-advised and indiscriminately-vaunted cures which have made this disease a reproach to the profession. Let us see on which side he is. What has he discovered? Nothing more than that his own (and his mother's) headache was owing to hypermetropia and astigmatism. He has not brought to light a single new scientific fact.

If he had examined the literature of this subject, he could have learned long ago that certain cases of sick-headache are dependent upon weakness of the eyes, which in its turn is frequently chargeable to the presence of optical defects.

Half a century ago Gorget and Calmeil* observed that naturalists who pass many hours in the examination of small objects, which sometimes require to be magnified with the microscope, under strong light, are subject to this painful disease of the head (cephalalgie). These gentlemen did not tell us that the headache in these cases was due to hypermetropia or astigmatism, because they had poor acquaintance with these errors of refraction; but they observed the fact that prolonged use of the eyes on small objects gave rise to headache. The condition of the eye to which they refer was in all probability that which Stevenson, Lawrence, Sichel,† and others described about that time, and later, as *hebetudo visus*, and for which Mackenzie, in 1843, gave us the name *asthenopia*. This affection was then, as now, recognized with all its symptoms, but it remained for Donders to demonstrate, in 1858, that the accommodative form is nearly always dependent upon hypermetropia.

From this time forward we find hypermetropia mentioned as a cause of headache.

In 1869, Soelberg Wells,‡ writing on hypermetropia, expresses himself thus: "There is a feeling of tension and pain about the eye and over the eyebrow, which, if the work is persisted in, soon becomes more intense, and sometimes assumes the character of headache (which is often mistaken for nervous headache or migraine)."

Mauthner|| mentioned pain in the head as a symptom of accommodative asthenopia, in 1875.

Noyes,§ in enumerating the symptoms of hypermetropia, in 1881, said: "I have known nau-

sea to be caused, and in many hypermetropia is the cause of chronic headache."

In the same year, Harlan* said of accommodative asthenopia: "In fact the symptoms referred to the eyes may be the least prominent, or the sufferer may not even suspect his eyes at all, while the strain is manifesting itself by headache, dizziness, nausea, or nervous irritability, to such an extent as to excite apprehensions of serious disease of the brain." These quotations are presented to show that the connection between headache and those forms of eye diseases which are dependent upon optical objects has been recognized for at least fifty years, rather than to indicate the present state of our knowledge; and the last two were selected from among others to show that the subject has been mentioned in books written for the use of the general practitioner rather than the specialist.

Among those who are familiar with the use of the ophthalmoscope, there must be few indeed who would undertake the treatment of any case of chronic headache without first ascertaining the optical condition of the eyes.

It must be admitted then that Dr. Savage did not discover anything new in medicine. But he may object to my quotations, as he did in his second article† to the cases recorded in this journal by Dr. S. Weir Mitchell,‡ upon the ground that they do not refer to sick headache. He classes Mitchell's cases as nervous headache, without giving his own definition of sick headache, and affording his readers an opportunity of making comparisons themselves. He does, however, refer to Wood's|| description of the disease as "unobjectionable," but does not agree with him that "the predisposition for the most part, consists in debility of the stomach and a peculiar state of the nervous system which renders the brain especially sensitive to gastric irritation."

In as much as Dr. Wood placed sick headaches in the same chapter with irritation of the stomach, and gave only these two causes, it is fair to infer that when he wrote these words he recognized only that form of the disease which is dependent upon gastric derangement.

The peculiar state of the nervous system of which he speaks represents only the otherwise undefined difference between the nervous systems

*Dictionnaire de Médecine, Paris, 1834. Tom. VII., p. 118.

†Hirsch, Hand-buch der g. Augenheilkunde, Graefe, n. Saemisch, B. VII., s. 524.

‡Wells on Long, Short, and Weak Sight, p. 174.

||Optische Fehler d. Auges. S. 356.

§Diseases of the Eye, Wood's Library of Standard Medical Authors, 1881.

*Holmes's System of Surgery, American Ed. vol. ii., p. 33.

†Medical and Surgical Reporter, Oct. 28, 1882.

‡Dr. Mitchell also called attention to this subject in the American Journal of Medical Science, April, 1876.

||Practice of Medicine, G. B. Wood, M. D., etc. Edition of 1849. Page 536.

of dyspeptics with sick headache and those without it, without indicating any particular morbid condition. In reality, then, his idea was that this disease was caused by irritation carried from the stomach to the brain. Immediately after this reference, Savage says: "Wood's views, as well as all others ever expressed, must be erroneous, if my doctrine is true." His doctrine is that hypermetropia and astigmatism, alone or combined, are the only causes of sick headache.

Upon the same page he tells us that in the *REPORTER* of May 6, 1882, we can "read an admirably written clinical history of the disease by Dr. Smith." This gentleman describes three forms, which are as unlike each other as any three cases of the same disease can possibly be. In the first form the prodromic symptoms all point to the stomach as the seat of disordered action; in the second, to the eyes, and in the third, to the nervous system, as is evinced by the inability of the subject to undergo any extra exertion, or change of habit for a day, without suffering. After the disease is fully developed, he notes no difference between these forms, and his description of that stage agrees fully with that given by Dr. Wood. They both give as prominent symptoms nausea, vomiting, disorders of sensation in other parts than the head, and of the special senses, especially of the eyes and ears.

Now then, besides acknowledging these symptoms as all properly belonging to sick headache, Dr. Savage tells us that "the relationship between the eyes and stomach is so intimate that when one is affected the other will sympathize, as in sick headache," and yet asserts that the cause of the disease is always in the eyes.

He would have us believe, then, that nervous sympathy flows in one direction only—from the eyes towards the stomach.

Why does he not explain the connection he has found between these organs?

He says "he will not attempt in this communication to give the relationship existing between the stomach and the eye;" and this is to be regretted, for if he had given it, he would certainly have avoided the ridiculous error into which he has fallen.

In the absence of all the teachings of physiology, the careful observation of cases of sick headache alone would direct attention to the brain as the connecting link, through which functional disturbances play either way, back and forth. In most instances the pain in the head holds an intermediate position in the succession of symptoms: if the disease appears in the gastric

form, some derangement of the stomach usually ushers it in; then comes pain in the head, and later on, the reflex symptoms.

On the other hand, if the cause is in the eyes, the first sign of an approaching attack is commonly some discomfort about these parts; then follows the headache, and, during its continuance, vomiting or other sympathetic disorder.

It is exceedingly difficult to understand how Dr. Savage can reconcile Wood's or Smith's account of the disease with his theory of its causation. If the disease begins in one case with irritation of the stomach, which extends to the brain and is thence reflected to the eyes; begins in another in the eyes, is transmitted to the brain and from there affects the functions of the stomach; and in a third, has its origin in uterine disturbance with spinal irritation, of which the effects extend to the brain (giving rise to headache), and thence disorder both stomach and eyes; does it not seem probable that the cause and origin may lie in any of these organs, seeing that they may be interchangeably the starting and ending place of the morbid process.

As belonging to the third order here mentioned, the following case may be presented: Mrs. — consulted me in 1873 for, (as she put it), "weakness, headache and womb disease."

She was anæmic, debilitated, suffered with sick headache once in about two weeks, and her uterus was prolapsed in the first degree. A properly adjusted pessary, with iron, quinine and belladonna restored her health after several months' treatment.

During the next five years she came under my care several times for the same symptoms, excepting the displacement of the uterus which had been permanently remedied.

In August, 1878, at which time she had one of the breaks in health, the following note was made of her headache: She has been troubled with the headache again since the warm weather set in. At times she has two attacks in one week, each lasting a day, or longer; then, again, she may be free from it several weeks. Upon going from home a day, she is pretty sure to suffer. Irregularity in habits, especially in taking meals, is apt to be followed by a paroxysm, as when a meal is taken late and the stomach becomes very empty. Sometimes it appears without any discoverable cause. It does not seem to be influenced by menstruation. When caused by emptiness of the stomach, it comes on during the fast, and is aggravated severely by taking food or drink; if vomiting then supervenes, as it often does, it

brings relief. The "sick headache" is the most frequent, but she also gets a form that is not accompanied by sickness at the stomach, and is not as intense, but continues longer than the other. In this form the pain is usually worse in the forehead, equal on both sides, while in the gastric form it is confined to one spot in the right temple. In both forms it is of a dull aching or rolling character; in the gastric, so severe that she cannot lie down or keep quiet in any position, while in the other, rest and quietude afford alleviation.

The hands and feet are cold during the paroxysms in both forms, and the face is pale. Since the return of the headache and debility she has had much dull aching pain in the eyeballs, as in former periods of ill-health. There is slight hyperæsthesia of the retina; and she says the lids feel heavy, which is owing to blepharitis marginalis. $V = \frac{2}{30}$. The fundi oculi are normal, as is also the refraction. She came to town this morning, and after seeing me, spent the day with friends. On her way to the cars toward evening she stopped in again and requested me to give her something to relieve a terrible headache she was suffering, and which she feared would prevent her reaching the railroad and home to-day.

She described the pain as dull, heavy and rolling with each motion of the head, most intense in the forehead. The face was deathly pale, and the hands cold. There was intense nausea, which appeared only after the pain became very severe. She was given $\frac{1}{10}$ gr. of sulphate atropia, and ordered to repeat the dose every half hour until relieved or until dryness of the throat and dilatation of the pupil would appear. At her next visit she reported that the second dose was unnecessary, and that the headache disappeared before she reached the depot.

A course of tonic medication directed to the nervous system restored her to health and freedom from headache again.

This case may be said to present two types of headache—the *sick* and the *nervous*, but in reality they are the same thing. The sick is only a further development of the nervous, as is shown by the fact that the vomiting appears only after some continuance and increased intensity of the pain. The same observation is applicable to a very large percentage of all paroxysms of this disease—they begin as nervous and end as sick headache.

This case is one among many similar ones I might cite in proof that sick headache is not always traceable to optical defects. Although there was well marked distress about the eyes, the most

careful examination failed to reveal any error of refraction, and the thoroughness of the examination is attested by the result of treatment addressed to other parts of the body. It presents an interesting feature also, as viewed with Dr. Savage's observation, that the application of atropia to his eyes stopped the headache immediately, in the very remarkable effect which the small dose of atropia manifested. I have seen this happy result follow the use of small doses of atropia and belladonna in certain forms of sick headache so often, without paresis of the accommodation, that I cannot help thinking it is produced without any accompanying action on the ciliary muscle.

In Dr. Savage's case the headache was undoubtedly due to accommodative asthenopia, dependent upon hypermetropia and astigmatism, and the charming effect of the atropia was in all probability due to its direct action on the ciliary muscle.

Now then, after having thus examined Dr. Savage's claim, and the articles to which he refers I have come to these conclusions:

1. That Dr. Savage did not discover the causative relation which optical defects hold to sick headache.

2. That, although optical defects do give rise to sick headache, they are not its sole cause.

3. That the experience of the profession warrants the assertion that, while optical defects give rise to various kinds of head pains, the severe form denominated as sick headache cannot be ascribed to them as frequently as others.

Dr. Savage deserves credit, however, for having directed attention to the carelessness of authors of works on "Practice of Medicine" in neglecting to mention optical defects among the causes of sick headache. He might with propriety have included also writers of monographs on this disease, at least all those whose works I have seen.

This method of using belladonna is not original with me; nor is it with our eminent modern therapeutists, Bartholow, Ringer, and others. We have all borrowed it, upon our own easy terms, from our erring and wayward homœopathic brethren.

STATISTIC AND ALLIED FEATURES OF DIPHTHERIA.

BY THOS. S. SOZINSKEY, M. D., PH. D.,
of Philadelphia.

THE GRAVITY OF THE DISEASE.

The serious form of sore throat, which the Capadocian physician, Aretæus, who flourished about the end of the first century of our era, tells

us was common, in his time, in Syria and Egypt, is generally held (with barely enough reason, I think,) to be really the disease first fully described by Bretonneau, a physician of Tours, in 1826, under the name of diphtherite, or as it is usually called among us, diphtheria. Many of the grievous scourges which have prevailed again and again down through the centuries, of which more or less record remains, are supposed to be none other than it. However, it is certain that in modern times diphtheria has, in epidemic outbreaks and otherwise, destroyed a shocking number of lives. Of late it has taken a leading position among pestilences. It perhaps outranks scarlet fever in the extent of its ravages among the young. In Philadelphia its victims numbered over 700 in 1876, and still far more in the year just ended (915); and in no year of late have there been less than 300. Evidently it is a very formidable disease.

It is more than probable that the disease has been proving more destructive to life within a few years than formerly; statistics from almost all quarters show this only too plainly. Its increased destructiveness is very evident in Philadelphia. From 1860 until 1875 the number of deaths in this city was, on the average, less than 250 (237) yearly; while since then it has been more than twice as great (538). During the last two months of 1882 the deaths from it numbered five or six daily.

The cause or causes of the lamentable increased destructiveness of the disease should, I need hardly say, be carefully sought for. Is there anything besides a wider diffusion of the contagion at play to produce the increase? In the case of Philadelphia, has there been a change in the sanitary conditions favorable to the disease? Has the disease become more virulent? Has there been developing a greater susceptibility to it? Do those attacked succumb more readily now than formerly?

THE AGE OF THE VICTIMS OF THE DISEASE.

In an article on diphtheria published a few weeks ago, a reputable writer states that the disease is just as serious in a person fifteen years old as in one of as many months. Of course, this statement is absurdly untrue. The disease is essentially one of infancy and childhood, so far as fatality is concerned.

Dr. Bristowe says, in his work on the "Practice of Medicine," that it is "far more common among young children, especially between the ages of three and six, than in persons of more mature age, and is both actually and relatively much more fatal to them." This may be said to be the cur-

rent opinion. According, however, to the United States census returns for the year ending June 30, 1870, most deaths are of infants; and the number steadily decreases from year to year. Thus in the first year of life the deaths reported were 1,011; in the second, 998; in the third, 791; in the fourth, 736; in the fifth, 549; in the period from the fifth to the tenth, 1,299; in the period from the tenth to the fifteenth, 335; and in the period from the fifteenth to the twentieth, 141. In Philadelphia there are nearly three times as many deaths of children in their second year as in their first; and the deaths of persons over fifteen are few.

THE SEX OF THE VICTIMS OF THE DISEASE.

There is excellent reason for believing that in general the female sex is the more favorable to the mastery of the disease. Statistics seem to show that considerably more females than males die from it. Very early in life, however, this is not the case. According to the census figures there were in the first year of life 546 males to 465 females; in the second, 535 males to 463 females; in the third, 431 males to 360 females; in the fourth, 343 males to 393 females; in the fifth, 263 males to 286 females; in the period from the fifth to the tenth, 517 males to 728 females; and in the period from the tenth to the fifteenth, 125 males to 210 females. Hence, it would appear that it is only from the third year forward that the deaths of females are in excess; before that time males succumb in greater number. It is worth while, however, to bear in mind that in the first year or two of life there is a small percentage more male than female children. Philadelphia statistics, unfortunately, are so compiled that little light is afforded by them, as to the relation between sex and disease.

HAS THE DISEASE CYCLICAL PHASES?

The study of the statistics of the mortality in Philadelphia brings to light a strange tendency of diphtheria to run in cycles of intensity, the period being six years. The following table indicates this feature:

Date.	No. of Deaths.	Date	No. of Deaths.
1860	307	1872	150
1861	502	1873	110
1862	325	1874	181
1863	434	1875	656
1864	357	1876	708
1865	260	1877	458
1866	192	1878	468
1867	119	1879	321
1868	119	1880	323
1869	182	1881	457
1870	172	1882	915
1871	145		

It is likely because of the fact that the disease prevails most markedly in the colder half of the year that the period of maximum cyclical intensity seems to last each time two years. For some reason or reasons, then, there is every sixth year an excess of persons very liable to contract the disease, and possibly, also, very liable to succumb to it. Either this, or it must be assumed that the disease becomes more virulent, that the "epidemic influence" becomes more decided—to use a phrase employed by writers who still cling to the old-fashioned way of referring diseases to mysterious causes.

RELATIONS OF SEASON AND WEATHER TO THE DISEASE.

But little intelligent attention has been given to the special atmospheric conditions which are promotive of the spread of diphtheria or otherwise. Most writers on medicine who refer to the matter at all make rather amazing statements. Thus, Dr. Roberts, in his work on the "Practice of Medicine," says: "Hot and dry climates and seasons appear to favor the development of the poison-germs." The doctor would not have expressed such an opinion if he had taken pains to learn anything about the matter. Had he turned to the well-known studies of Mr. Buchan and Dr. Mitchell, he would have found that in England the disease is most prevalent "in cold, moist weather." I advise the reader, however, by the way, to avoid the common mistake of taking the Englishman's "cold" and "warm" as synonymous with what we call "cold" and "warm."

As I have already stated, it is in the colder half of the year that diphtheria is most prevalent. During the 14 years ending with 1881, there were in Philadelphia, in the first quarter, 1179 deaths; in the second, 940; in the third, 792; and in the fourth, 1519. According to these figures there were nearly twice as many deaths during the fourth as during the preceding quarter. Not far from two-thirds occur in the colder half of the year. A similar statement holds good in reference to the returns of the census (3,627 to 2,673). This greater winter prevalence is common, I think, to all contagious diseases. The cause is likely, to some extent at least, the better chance for the virus to take effect, because of crowding and bad ventilation. Cold in itself should not be favorable to the spread of contagion, for it serves to lessen and stop activity in matter, both organized and unorganized. Nor indeed is it in the very cold any more than in the very warm weather that contagious diseases are apt to be most prevalent.

In Philadelphia, moderately cold, damp weather

is the most favorable to the spread of diphtheria. Or rather, I believe, I should say, the change to such weather. A fall in the temperature to from 60° to 50°, and an increase in the average daily humidity to from 70 to 75 or over, will very certainly be followed by a decided increase in the number of cases. Of course, then, an increased mortality may be expected toward the beginning of November. The general absence of sufficient preparation for such vicissitudes of atmosphere as are usually met with toward the end of October and in November, and the segregation of population which they produce, are evidently potent indirect causes of the prevalence of the disease. Weather which has been regarded time out of mind as favorable to the production of catarrhs, is the weather which is most favorable to diphtheria.

I have hinted above that very cold weather is not very favorable to diphtheria. A somewhat prolonged spell of cold weather, weather below the freezing point, tends greatly to extinguish the disease. This was markedly observable in Philadelphia in January and February, 1875, in January, 1876, and in December 1881.

A decided rise of temperature, especially if sudden, in the colder half of the year, increases the cases of the disease. With the spell of oppressive warm weather which is usual in Philadelphia in May, there is almost certain to be an attendant decided increase in the mortality from the disease. This was very noticeable in 1875 and in 1877, years in which the spell was very marked.

I have seen a statement to the effect that a heavy rainfall may cause an increase in the disease; but there is little or no ground for such a belief. If there be a heavy rainfall at any time during the last quarter of the year, an increase in the mortality may follow, but it will depend on the temperature and the humidity. Thus, in the second week of November, 1877, there was a heavy precipitation followed by a great increase in the mortality; but the temperature was declining towards 50° and the humidity was rising above 70. On the other hand, there was a heavy precipitation in the fourth week of November, 1876; but there was no evident consecutive increase in the mortality. The temperature was low, and hence unfavorable. In a large city, at least, a heavy rainfall should tend to prevent the spread of the disease, if there be any truth in the notion that it springs largely from dirt. This would appear to be the case sometimes, especially in the warmer part of the year, as in June, 1881, in Philadelphia.

It would be easier to trace a connection between a marked absence of precipitation and the prevalence of diphtheria than the reverse. Thus toward the end of December, 1877, there was a great rise in the rate of mortality in Philadelphia—a month in which there was no precipitation, save a little in the first week of it. But during that month the humidity and the temperature were both unusually high. In December, 1882, there was little rainfall and a very heavy mortality, but the weather was much warmer than usual, and humid.

It would not be hard to trace a connection between the prevalence of the disease and the direction of the wind in Philadelphia. When the temperature is at a moderate figure, and the wind blows from the east, northeast, or even the north, the condition is favorable to diphtheria. Such winds are generally attended with a high state of humidity of the air.

HOW TO PREVENT THE DISEASE.

It is safe to say that the vast majority of the cases of diphtheria, properly so-called, are due directly to contagion, that is, a virus generated in the system of a person affected with the disease. In fact the cases which are produced otherwise, if at all, are exceptional, I believe. Soft throats of various degrees of severity may be greatly multiplied by bad drainage, sewage exhalations, and filth generally; and no doubt these are often said by the incompetent or knavish practitioner to be cases of the alarming disease. I can readily believe that sewage exhalations and unsanitary conditions of all sorts may tend to produce a pronounced susceptibility to the disease, and to render the system little able to resist it when present; but I can find no solid reason for the opinion (of Dr. Snow and others) that it is perhaps always due to "impure air or impure water," that if cases exist in a house it is "proof positive that the causes of the disease exist in the house." This notion seems childish in view of facts like these:

In 1875 the victims of the disease in Philadelphia were from three to four times as many as in any of many years before. In that year the deaths in the 21st ward (an outer one, the one in which the town of Manayunk is situated) of that city were out of all proportion to what they were in any other of the 29; they were 72, or one to every 237 of the population—five or six times more than in most of the others. In 1876 they were still more than in any of the other wards, as might be expected from the continuance of the epidemic over from the last quarter of the preceding year.

The deaths in the ward in 1877 were 7; in 1878 they were 2; in 1879 they were 6; in 1880 they were 8; and in 1881 they were 6—less for any year than in very many of the others. The 27th was the ward which had the smallest proportion of deaths in 1875, there being 4, or 1 to 5614 of the population. Now, in 1878, the year in which the mortality was lowest in the 21st, the rate in it was far higher than in the majority of the others, there being 19 deaths.

A general recognition of the truth that any case of diphtheria worthy of the name is decidedly contagious, is something greatly to be wished for by every philanthropic member of society, because the recognition of it has a vital connection with the supremely-important matter of the prevention of the spread of the disease.

While not neglecting the sanitary conditions, it is the contagion to which the practical sanitarian should principally give his attention, if he would restrict and suppress diphtheria. In a recent report to the National Board of Health, Dr. Elisha Harris says; "The infection and propagating cause of diphtheria is the one essential cause which sanitary science lays hold upon to arrest and to prevent its epidemic prevalence." Dr. H. B. Baker and almost all other competent sanitarians are also of that opinion.

The American Public Health Association, at its meeting in New Orleans, in December, 1880, in connection with a resolution that "the contagiousness of diphtheria is now well established," resolved that the disease "should in all cases be treated with the same rigorous isolation and quarantine that is everywhere enforced against small-pox."

There is a crying need in Philadelphia and many other communities for the institution of the rigid isolation plan of prevention of disease. Why it is not brought into play to any great extent is unaccountable. Health authorities that have the power to apply it, and do not, may be justly blamed for much of the great suffering and lamentable mortality from the disease. It is a horrible outrage on a community to let anything possible be left undone by organized authority which will check the spread of a deadly contagion. It is not interfering improperly with the just rights of any one affected with a contagious disease to isolate him. His wish should not rule in the case: He might be destroying life right and and left without being conscious of it. A young man affected unmistakably with diphtheria went to a crowded church the other day, and did not realize, although told, that he was committing a

terrible crime against his fellow-men. The intelligent part of a community, which is surely the greater, should see to it in an official way that every one affected with a serious contagious disease is duly isolated, and that disinfectants and fire are duly brought into play to extinguish the contagion regardless of cost. Doubtless all honorable physicians would be glad to have an authoritative inspector to enforce proper sanitary precautions in every case.

The plan of dealing with diphtheria and other grave zymotic diseases indicated, is both sound and politic, and it is practicable too. Through a special hospital, a corps of sanitary inspectors, and the enforcement of a law requiring all practitioners of medicine to immediately report the cases met with by them, the malign power of diphtheria might be overcome, and the perennial destruction of children now tolerated be almost entirely prevented.

The right way to deal with diphtheria or any other contagious disease is precisely the way leprosy was dealt with long, long ago, namely: isolate each and every case, and through cleansing and disinfecting processes, and a discriminating resort to fire, extinguish the contagion. It is all explained in Leviticus. When a person became affected with leprosy he was declared unclean, and then the rule in application was: "He shall dwell alone; without the camp shall his habitation be." The clothing used by him was cleansed and disinfected or burned, and his place of residence subjected to thorough purification, or destroyed entirely.

In damp, moderately cold, changing weather, special care should be exercised not to experience disturbances of the system, if one would keep himself little susceptible to the disease. Especially should children be protected; and, of course, very special care should be exercised when the disease is prevailing extensively.

Weakness seems to greatly favor the disease. In adults it is generally light. Females suffer more from it than males from the third year of life forward—the greater life-force in boys becoming apparent after that age, the mode of life likely doing much to produce it. Let the strength be specially supported, then, when the disease is prevailing; for it will not only favor escape from it, but recovery from it if contracted.

—A case of real leprosy exists in Salem, Mass. The patient contracted the disease in the Sandwich Islands seven years ago, and it is approaching a fatal termination.

HOSPITAL REPORTS.

ON POST-MORTEM EXAMINATIONS OF THE BRAIN.*

DELIVERED BEFORE THE MEDICAL CLASS OF THE UNIVERSITY OF PENNSYLVANIA,

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Lecture I.

Reported by WILLIAM H. MORRISON, M. D.

GENTLEMEN:—I have here a body with the brain in the skull, and also brains which have been removed, and shall to-day lecture to you on the post-mortem examination of the brain.

Very little attention is, as a rule, paid by physicians to the study of the proper methods of examining the brain, although this subject is one of great practical importance, and much may be learned by such examinations if carefully conducted.

If possible, you should always have a number of keen-edged knives of various lengths. One should be long enough to slice entire hemispheres, and one should be small enough to pass through the foramen of Monroe. The knives when being used should be wet from time to time, preferably with alcohol.

The incision through the scalp should be made from within outwards, in order to prevent mutilation of the hair. The temporal muscles should be left in position, as a few stitches through them will assist subsequently in holding the skull-cap in position.

You should, when possible, make certain skull measurements as you proceed. Several methods of making these measurements have been recommended. One of the best of these is that of Wight.† In this method, the mastoid processes are taken as the points of departure; and the measurements are made from the middle of the process, just back of the auditory meatus, ordinarily from half an inch to an inch above the mastoid extremity. This point is nearly in a line with the base of the cerebrum, but it is a little below the insertion of the tentorium, so that some of the cerebellum may rise above this point. Having located these points, the measurements are made in the following directions from one mastoid process to the other:

(1) An anterior arch, just above the supra-orbital ridge.

(2) A frontal arch, over the frontal eminences.

*In the Philadelphia *Medical Times* for April 24, 1880, was published a lecture "On the Post-mortem Examinations of the Brain," delivered by me before the Philadelphia County Medical Society, February 11, 1880. This I have freely used in the preparation of these lectures. Dr. S. T. Clevenger published in the "Journal of Nervous and Mental Diseases" for October, 1879, a paper on the same subject; and a valuable work on "The Human Brain; Histological and Coarse Methods of Research," by W. Evans Lewis, of the West Riding Lunatic Asylum, has just appeared. From these sources, and from the works of Ecker, Virchow, Charcot, Richet, Ferrier, Bitot, Delafeld, Orth, Holden, and others, material has been obtained.

†Some Measurements of Skulls and Heads, etc., monograph by J. S. Wight, M. D., of Brooklyn, N. Y.

(3) A middle arch nearly over the coronal suture. In better developed skulls and heads, the coronal suture is further forward; in less developed skulls and heads, the coronal suture is further backward.

(4) A superior arch, nearly over the vertex and about parallel with the axis of the foramen magnum.

(5) A posterior arch, over the occipital protuberance, nearly on a line with the insertion of the tentorium. These are the inter-mastoid arches.

In addition, the following should also be taken:

(6) A diametrical base line from one mastoid process to the other.

(7) The greatest transverse diameter.

(8) The greatest antero-posterior diameter—leaving out the frontal sinuses.

(9) The greatest antero-posterior circumference—leaving out the frontal sinuses and measuring somewhat above the occipital protuberance.

(10) The masto-frontal angle, which is included between the plane of the anterior and superior arches.

In sawing through the skull, the cut should not be exactly circular, but should be wedge shaped, either in front or behind. The old plan was to make the wedge posteriorly, but I think that it is better to make it anteriorly. This causes the bones to fit together more neatly than when the cut is a simple circle. The bones should not be sawed entirely through, but the section should be finished with the chisel, mallet and hook. In this way injury to the meninges and brain is avoided. If possible, the dura mater should be left intact. A certain amount of adhesion of the dura mater to the skull is usually found, but a sharp pull with the hook is usually sufficient to separate the skull-cap from the dura mater. If the adhesions are great, you should carefully separate them by the knife and fingers. According to my experience, the greatest amount of normal adhesion is found in the very old and in the very young, while the least is found in youth and middle life. It is important to bear this point in mind in making post-mortem examinations in young children, say from one to three years old, for at this age the brain is less consistent than it is later in life, and a sharp pull on the skull-cap may tear the brain to pieces. A good plan in such cases, is after the skull-cap has been thoroughly loosened with the saw and the chisel, to slit the dura mater in the line of the saw and remove it with the skull-cap. In the subject on the table, evidently a real external pachymeningitis has been present, for the dura mater was everywhere strongly adherent to the inner surface of the skull.

Having removed the skull-cap it should be carefully examined, and the thickness of the skull in definite localities should be noted. The exact position of the cut should be observed, for, as you can see, the thickness of the skull will vary greatly according to the position of this section. The measurements of thickness should be described as having been made at certain parts of the frontal, parietal, temporal and occipital bones. The inner surface of the bone should now be examined for abnormal conditions, such as caries and exostoses.

The external surface of the dura mater presents

many things for minute examination. In the first place, you may have evidences of pachymeningitis. If this has been recent, everywhere the evidences of inflammation will be noticeable—redness, swelling, infiltration, etc.; if old, pus may be found between the dura mater and the skull, or you may have thickening, induration, or concretions. Syphilitic disease of the external surface of the dura mater may also be found, although syphilitic tumors are most frequently found beneath the dura mater or pia mater.

Extravasations of blood may be present between the dura and the bone; and as I myself have seen, the bone itself may be soaked with blood.

Before proceeding further, the longitudinal sinus may now be carefully examined. The other sinuses may be left until after the removal of the brain. The examination of these venous channels is often omitted; but nothing is more important. The longitudinal sinus should be laid open, preferably with a scalpel or bistoury, from before backwards. You look first for thrombi. In cerebral disease thrombi are frequently found, and even when disease of the brain is absent, thrombi may form in the act of death. Evidences of phlebitis, thickening, deposits, etc., should be sought for. The condition of a thrombus, as to organization, its size and site, should be determined. The association of phlebitis with caries, or other disease of the bone, should be investigated.

Having done this, you next sever the dura mater from its anterior connection with the crista galli. This is done by lifting up the dura with the fingers or forceps until the point of junction is reached, and severing the falx at its anterior extremity with a knife. The scalpel is then inserted to one side of the longitudinal sinus, and an incision made in the line of the saw and carried backwards to the tentorium. A similar incision is made on the opposite side. The convexity of the dura, with the falx, are then carefully detached by pulling and dissecting.

Finally all the attachments between the under surface of the cerebrum and tentorium are separated. The brain covered by the pia mater is now exposed. This surface should now be examined, for important signs may now be present which will entirely disappear in the further process of removal of the brain. Oedema may be present. It is a very common condition in the brains of the insane and in senile atrophy, and one which will very probably disappear during the removal of the brain from the skull. If the pia mater and arachnoid have been left intact, the amount of the fluid, its character and its position, can be determined. In order to do this, you must have a correct understanding of the membranes and the spaces between them; but before speaking of these, I wish to say a word about the paccchionian bodies or granulations.

The paccchionian granulations are apt to give trouble to the tryo. These are little granular bodies found on the convex surface of the brain, most numerous along the longitudinal sinus. It has been recently stated that they have some connection with the veins of the membranes of the brain. Sometimes they run together, forming masses from three to six inches in length. This is not necessarily an evidence of meningeal dis-

case. There may be a great normal development of these bodies. You should, however, note every point just as it exists. Do not suppose that you have meningitis with exudation simply because you have exuberant pachionian granulations.

Let me now make a few remarks in reference to the membranes and spaces which, as I have said, must be understood in order to make a satisfactory examination. The brain has three membranes, the dura mater, the arachnoid, and the pia mater, although some authorities do not regard the arachnoid as a distinct membrane. One layer of the arachnoid, the parietal, lines the inner surface of the dura mater, while the other, the visceral, covers the outer surface of the pia mater. You are, no doubt, familiar with the two spaces ordinarily described, *i. e.*, the arachnoid and the sub-arachnoid space; but there are really four spaces to be studied in making these examinations. These are, in addition to the two just mentioned, the sub-dural and the epi-cerebral spaces. The arachnoid space is that familiar to you as the space between the parietal and visceral layers of the arachnoid, or between the internal arachnoidal surface of the dura mater and the external arachnoidal surface of the pia mater. The sub-arachnoid space is that beneath the visceral layer of the arachnoid. It is formed by this layer jumping the fissures and the spaces at the base of the brain. By a simple incision, I open this space in the position of the fissure of Sylvius. The visceral layer of the arachnoid does not directly bridge the longitudinal fissure from one hemisphere to the other, but it first descends to just beneath the falx, and then crosses the longitudinal fissure. When the dissection is carefully made, this can be seen. In this sub-arachnoid space there is found normally a certain amount of the cerebro-spinal fluid, but if atrophy of the brain has taken place, there may be an immense amount of this fluid. If it is desired to know the amount of liquid in the ventricles, now is the time to determine it. Make a small incision into the ventricle from above through the longitudinal fissure, insert the nozzle of a syringe, and withdraw the fluid. Of the other two spaces which should be remembered, the sub-dural is between the dura mater and the parietal layer of the arachnoid. It is a practical space, because it can be injected. In hematoma of the dura mater, the existence of this space may become evident. The other, the epi-cerebral space, is nothing more or less than the space between the pia mater and the naked brain substance. In atrophy of the brain, the whole pia mater may be lifted up, and there will be effusion, not only into the sub-arachnoid space, but also into the epi-cerebral space. Variations in the amount and quality of the cerebro-spinal fluid, pachymeningitis, clots, coagula, opacities, deposits, and adhesions of the membranes, should be noted.

We are now ready to remove the brain itself. If the dura mater of the convexity has been removed in the way that I have described, the brain may be quickly taken out. The brain should be thoroughly supported on all sides. Tilt the organ a little backwards, and proceed to sever the nerves and vessels. The optic nerves are first cut, then comes into view the infundibulum, then the vesicles appear. In cutting nerves and vessels, al-

ways do so as far as possible from the brain. If it is desired, the pituitary body may, by a little dissection, be removed intact. After severing the third and fourth pairs of nerves, I come to the tentorium. I make an incision through the tentorium on each side along the lateral sinuses. This exposes the cerebellum on each side. With these two cuts, everything is free as far as membranes are concerned. I now divide the remaining nerves and vessels. Passing a knife down as low as possible, I sever the spinal cord. The brain is now withdrawn from the skull without the slightest difficulty.

The floor of the skull should be carefully examined, the neighborhood of the foramen magnum and the sella turcica receiving special attention. It is often important to examine the Casserian ganglion, and the portions of the cranial nerves remaining behind in the skull grooves and cavities. Deformities of the internal surface of the skull should be looked for. One of the most common seats of intra-cranial syphilitic disease is near the petrous portion of the temporal bone. The ethmoidal region should also receive close attention.

The remaining sinuses require careful examination. Beginning at the torcular herophili, each sinus should be opened and examined in the same manner as was the longitudinal.

The internal surface of the dura mater is to be examined for deposits, thickening, or other abnormal appearances. In some forms of pachymeningitis the dura mater is very thick; in hydrocephalus and hypertrophy of the brain, sometimes very thin. In internal pachymeningitis, the inflammation, curiously enough, is likely to involve certain areas which correspond pretty accurately with the parietal bones. Well marked thickening, even to the extent of one-tenth or one-eighth of an inch, or more, is sometimes found.

Next proceed with the base of the brain upwards to a further examination. A good method, and the natural one, is to place the brain in the skull-cap. There it will fit most accurately, and enable you to study the parts most conveniently and most nearly in position.

The pia mater of the base is to be examined for evidences of inflammation, effusion, and the like. Do not be misled into recording that there is congestion here or elsewhere in the pia mater, or in the brain substance, when there is no real congestion. The veins are often filled with blood without any real congestion; or there may be a hypostatic congestion. True hyperemia will show itself by staining, and appearances not removable by water or ordinary handling. Following Niemeyer, we should make it a rule to consider hyperemia of the cerebral membranes as proved only in those cases where the finest vessels as well as the veins are injected, and where the overloading of the cerebral vessels is not at all in proportion to the amount of blood in other organs.

The vessels at the base of the brain are to be examined with care. The arrangement of the vessels forming the circle of Willis, is to be noted. Here is the circle of Willis, removed by Dr. Elder. As you know, the vertebral arteries pass up and unite to form the basilar. This gives off the posterior communicating arteries which pass forward and join the carotids. The anterior and middle cerebral arteries are then given off—the latter

going to the fissures of Sylvius. The anterior cerebrals are joined by means of the cross branch, the anterior communicating artery. We are indebted to Heubner and Duret for much of our knowledge of the blood supply to the brain, while Charcot has paid special attention to the lesions arising from hemorrhages, embolisms, softenings, etc.

A few words about the distribution of the branches of the circle of Willis may prove of value.

The anterior cerebral artery passes over the median surface, runs backward over the corpus callosum, and anastomoses to some extent with the branches of the posterior cerebral. It gives off branches which supply the orbital lobe, the convolution of the corpus callosum, first and second frontal convolutions, paracentral convolution and preæuneus. The middle cerebral or sylvian artery divides into four principal branches. The first of these has been called, by Duret, the frontal external and inferior. It supplies chiefly the third frontal convolution, and many instances of aphasia from its obliteration are on record. The second branch is the artery of the ascending frontal convolution. The third branch is the artery of the ascending parietal convolution, or posterior Rolandic lobule. The fourth branch supplies the gyrus angularis and superior temporal lobule.

Softenings in the regions supplied by these arteries produce consequences consistent with the function of each part. Disease of the ascending convolutions has been followed by paralysis, etc.

The middle cerebral is most frequently the seat of serious alteration.

I glance at the distributions of these vessels, because knowledge of this kind will assist you in seeking out lesions of the arteries. Having certain symptoms during life, you will, by preference, at once look to certain regions for softening, clots, etc.; or, again, having discovered a certain lesion in your examination, an area of softening, for instance, you will know what vessels to follow in searching for the cause of the lesions.

The examination of the arteries, and of the entire brain, will be facilitated by the use of a hand lens.

The color of the vessels should be noted. They should be examined for dilatations, of various kinds, for aneurisms, dilatations from embolism and thrombosis, and from syphilitic and tubercular disease. These can be readily determined by the naked eye. Twistings and kinks in the vessels should be looked for. These have sometimes great pathological significance. Kinks of the larger vessels are sometimes found as a normal peculiarity, but if, on examination, you find that the vessels throughout the brain present a great many little kinks, it means that the brain has been frequently congested, and that the spaces around the vessels have allowed the kinking to take place, and that this has afterwards remained as a pathological condition. The coats of the vessels should be examined for evidences of atheroma. The condition of the nutrient vessels is to be carefully observed. This is frequently omitted. These are vessels which pass from the under surface of the larger arteries and dip into and supply the interior of the brain. Lifting up the vessels at the base of the brain, it will be found that through the anterior perforated space dip down a large

number of straight vessels, supplying chiefly the corpora striata; through the posterior perforated space dip vessels supplying the optic thalami and their surroundings; and from the basilar artery vessels going to the pons. These vessels are sometimes diseased, and some of them are the chief seats of cerebral hemorrhage.

Having examined the vessels in position, they should be removed for preservation or further examination. This is to be done by cutting the vessels beyond the point at which the main vessels of the circle of Willis divide into branches, and drawing out the nutrient vessels and removing as much of each one as is possible. I have dwelt upon the examination of the vessels, as it is very important.

The next thing to be done is the removal of the pia mater. The pia mater has a certain normal amount of adhesion to the brain, in which a little but not marked difficulty in removing the membrane is experienced. The membrane sometimes strips off with the utmost ease. This always indicates a diseased condition, usually atrophy of the convolutions, with effusion of liquid between the pia mater and the brain, or the latter without atrophy. The membrane may be abnormally adherent. This is usually an evidence of inflammation, and even where there is no thickening or exudation, this abnormal adhesion may be present. This was the case in certain regions of Guiteau's brain. In these cases, drawing on the pia mater may detach little particles of the convolutions. The removal of the pia mater can be done under water, but, as Ecker points out, the stay of the brain in the water must be limited; it otherwise becomes too soft by imbibition. The operation can usually be readily accomplished out of the water. With a pair of fine forceps in each hand, the membrane and its vessels can be pulled out of any convenient sulcus, and adjoining convolutions uncovered. The finger can often be advantageously substituted for the forceps. It is not always necessary to remove the whole of the pia mater, but for a thorough post-mortem examination, the entire brain should be uncovered.

Before proceeding to examine the convolutions and the interior of the brain, I shall indicate to you the methods of determining the volume of the brain, its specific gravity, and the cranial capacity.* These operations can be performed in a short time, and often give important information. The brain should first be accurately weighed.

Dr. Hack Tuke's method of determining the volume of the brain is based on the Archimedean principle of displacement. This observer used a vessel of convenient size and shape, with a capacious spout placed at an acute angle with its sides. Water is poured into this vessel up to the level of the spout. Fluid contained in the ventricles of the brain and sub-arachnoid space is allowed to escape by several long incisions; and then the brain, including the medulla oblongata, is gradually immersed, the displaced water, as it escapes from the spout, being caught and measured, affording an exact criterion of the actual bulk of the brain.

* These methods are given from Dr. W. Bevan Lewis' monograph on "The Human Brain: Histological and Course Methods of Research."

The next thing to be done is to determine the cranial capacity, so that you may compare it with the volume of the brain. There are several methods of doing this. One is to fill the skull with flaxseed, and measure the quantity employed.

The plan used by Dr. Hack Tuke is as follows: The foramina at the base of the brain are plugged with tenacious clay—that used by statuary for modeling answers best; a small triangular piece is removed from the frontal bone; the calvarium is readjusted to the base, the dura mater being left attached. The space left by the saw in removing the calvarium is filled with clay, and a narrow bandage with clay spread upon it is made to surround the cranium three or four times, covering this space. If this has been carefully done, the cavity of the cranium will be found as tight as a bottle. Sixty fluid ounces of water having been measured, a sufficient quantity to fill it is now poured into it, by means of a funnel, through the orifice in the frontal bone, taking care that the stream does not wash away the luting of the foramina. The fluid which remains after having filled the cranial cavity is measured, and being deducted from the sixty ounces, gives the amount employed. To this must be added half an ounce for the space occupied by the luting.

The paraffin method, adopted by W. Bevan Lewis, may be described as follows: Fill up the foramina at the base as previously described. A triangular or wedge-shaped piece is now sawed out of the occipital bone, after removal of the calvarium, but retained in situ. The base is then filled with melted paraffin, the skull-cap replaced and retained by luting, as in the previous method, having previously trephined a piece out of the frontal bone. Through the latter orifice more of the paraffin is poured in, until the cranial cavity is filled. When cool and solid, remove the calvarium as well as the wedge-shaped piece of bone from the occiput, and then gentle pressure from behind tilts the solid mass out of the cranium, when it will be found to form an exquisite mould of the interior. The mould thus obtained is to be measured by displacement, whence we obtain the cranial capacity.

The normal brain capacity is about fifteen per cent. less than the cranial capacity. The presence of hypertrophy or atrophy can thus be readily determined.

The following table of brain-weights may be of interest:

	Ounces.
Maximum weight of adult male brain . . .	65
Average weight of adult male brain . . .	49.5
Minimum weight of adult male brain . . .	34
Maximum weight of adult female brain . . .	56
Average weight of adult female brain . . .	44
Minimum weight of adult female brain . . .	31

The heaviest human brain on record weighed 67 ounces.

The specific gravity may be readily obtained by the method of Dr. Bucknill, which consists in immersing portions of the cerebrum and cerebellum in a jar of water wherein a sufficient quantity of sulphate of magnesium has been dissolved to raise the density of the fluid to the point required, adding water or a strong solution of salt until the

cerebral mass hangs suspended in the fluid, without any tendency to float or sink; and then by testing with the hydrometer, the specific gravity is thus found with great delicacy and facility, a difference of half a degree in the density of the fluid being indicated by the rise or fall of the substance immersed.

I shall postpone the examination of the surface and interior of the brain until the next lecture.

UNIVERSITY HOSPITAL.

CLINIC OF JOHN ASHHURST, JR., M. D.,

Professor of Clinical Surgery in the University of Pennsylvania.

Reported by LOUIS J. LAUTENBACH, M. D.

Case 1.—Naevus; operation by ligation.

Case 2.—Hydrocele: tapping.

Case 3.—Stricture of the rectum: syphilitic: dilatation by rectal bougies.

Case 4.—Necrosis of tibia.

Case 1. Naevus—Operation by Ligation.

This child, but a few months old, has a tumor on the top of the head, consisting of an enlargement of venous capillaries, and known as a naevus. Naevi are divided into cutaneous and sub-cutaneous, one variety of the former kind being commonly known by the name of mother's mark.

The treatment of the cutaneous naevus is much more simple than that of the sub-cutaneous variety; the best treatment consists in the application of strong nitric acid, which causes the formation of a dry slough, the part often healing without any dressing. If the naevus is sub-cutaneous, this treatment is not sufficient. For the treatment of this variety a number of measures have been proposed, of which I consider that of ligation the safest. The injection of a solution of the perchloride or persulphate of iron, I consider to be attended by considerable risk: the injection may cause the formation of a clot which is carried into the general circulation, giving rise to embolism.

The method of ligature which is adapted to flat or elongated naevi is that described by Erichsen. It consists in passing a long double ligature, stained black for half its length, in such a way as to have a series of double loops on each side of the tumor, then cutting all the black loops on one side and the white on the other. The loops are secured so as to strangle the growth in sections. In a naevus of this size, however, the above method need not be adopted, as here by the introduction of two hare-lip pins at right-angles to each other, passing immediately beneath the tumor and then strangulating it by a ligature held in place by these pins, the desired purpose is attained. This method, as you see, has been here adopted, and already the color of the tumor has greatly changed, it now having a dark blue aspect.

In passing the pins, if the tumor is situated over a fontanelle, you must be cautious not to impinge upon the membranes of the brain. The ends of the pins must be cut off so as not to injure the surrounding skin.

After the part has been strangulated for a few days, the tumor sloughs and comes away, leaving

a circular ulcer, which heals by granulation. At present we will dress the tumor with dry lint, merely to protect it from mechanical injury. When the slough begins to separate, it will be dressed by zinc ointment, or a poultice, as may be necessary.

Case 2. Hydrocele.—Tapping.

This man comes here with a tumor of the scrotum, which we recognize as a hydrocele. There is fluctuation present; there is a certain lightness in proportion to the bulk—the specific gravity is low; the tumor has a pyriform shape, and by transmitted light the tumor would be found to be translucent. Sometimes this last test fails on account of the thickness of the tunics. I remember many years ago seeing at another hospital the operation of castration performed because this test had given a negative result, the case being really one of hydrocele, in which there was opacity of the tumor, due to calcareous degeneration of the vaginal tunic. A very good way to distinguish hydrocele from hernia is by invaginating the finger, and carrying it up to the inguinal ring, which in a rupture is found to be occupied by the neck of the hernia, whereas in hydrocele it is free, and the spermatic cord can readily be felt.

In tapping a hydrocele, care must be taken in introducing the trocar and canula to avoid wounding the superficial veins or the testicle. The skin must be made tense, and the trocar inserted perpendicularly to the tumor; when it has entered the sac, which will be known by the cessation of resistance, the point of the instrument must be turned upward and the trocar withdrawn, when the fluid escapes through the canula. In withdrawing the canula, care must be taken to prevent any fluid from getting into the scrotum itself; this is done by pinching up the scrotum as we withdraw the instrument. The wound is then closed by an adhesive strip.

Our patient has already had the operation performed on three different occasions, and is not desirous of having any radical measures adopted. The treatment of this case is simply palliative, and sooner or later will have to be repeated.

Case 3. Syphilitic Stricture of Rectum.—Dilatation by Bougies.

This man has suffered for some time with stricture of the rectum, complicated with a fistula in ano, which was operated upon last summer by Dr. Wharton. It is easily understood how irritation by the fecal matter above the stricture might cause ulceration in that position, and thus give rise to fistula; but it is harder to understand how stricture gives rise to irritation and consequent ulceration below its own position; and yet this is where the internal opening of the fistula is most often found.

The explanation is that if stricture is present, the normal action of the rectum by which the last particles of fecal matter are thrown out is prevented. There is always a certain amount of fecal matter retained between the stricture and the anus, which occasions irritation and formation of abscess below the seat of stricture.

We hope to be able to relieve this patient without any serious operation, by introducing bougies, thus obtaining instrumental dilatation, just as we do in stricture of the urethra.

Sometimes in these cases the long tube of

O'Beirne is very valuable for purposes of exploration. Where it is necessary to introduce injections high up, this tube is also of special value, since it may be carried up as far as the transverse colon.

The division of a rectal stricture by the knife or *écraseur*, if the constriction is situated as far from the anus as it is in this case, is attended with great risk of opening the peritoneal cavity. This operation we will not attempt, therefore, but will confine our efforts to the use of rectal bougies, beginning with one about the size of the finger, and then following this by others of larger size. Very often in the introduction of bougies, the end strikes against the promontory of the sacrum, and on account of the resistance offered to its passage a diagnosis of stricture is made when none exists. I have not a great deal of confidence in most of the reported cases of stricture very high up; they do occur, but they are very rare. Stricture even of the small intestine has been demonstrated by post-mortem inspection, but such cases are very exceptional. Almost invariably the stricture can be reached by the finger.

Our patient has a syphilitic history; he has in various parts marks of syphilitic ulceration; and I have no doubt that his stricture is due to the same cause.

The instruments which I prefer for rectal dilatation are flexible, and with bulbous or conical points. In the use of these instruments, care must be taken not to employ much force, as otherwise the rectum might be perforated. Passing now the bougies, beginning with one about the thickness of the finger and gradually increasing the size of the instruments, we can dilate the stricture as much as seems desirable. As in the case of urethral stricture, the use of the bougie must be continued at regular intervals.

Case 4. Necrosis of Tibia.

This case is an interesting one of bone disease, necrosis of the tibia, which was operated on some time ago at another hospital, but in which the disease has recurred. There are at present several sinuses to be observed, connected apparently with a large cavity in the bone.

In operations upon the bones, the Esmarch bandage is of great use in preventing loss of blood. The sinuses are covered with lint, the elastic bandage applied from below upward to a point above where the nutrient artery enters the bone, and then the rubber cord or tube adjusted.

The cicatrix of the former operation is situated above the internal malleolus. There is a sinus anteriorly, as well as one on the inner side. Making now an incision through the skin, we soon come down to a small hole, or *cloaca*, leading to dead bone. Thoroughly to lay open the cavity, we must, with a trephine or chisel, cut away the bone lying in front of it. Now cleaning out this cavity, we will see if the other sinus communicates with it, and if it does we will insert a seton through both openings. It seems, however, that this sinus communicates, not with the cavity already opened, but with another distinct cavity which extends downwards into the internal malleolus. Cleaning and scraping out this cavity also, we will stuff both of them with oiled lint, covering this with oiled silk, oakum, and a roller bandage.

MEDICAL SOCIETIES.

COLLEGE OF PHYSICIANS, OF PHILADELPHIA.

Observations on the Management of Enteric Fever According to a Plan Based Upon the So-called Specific Treatment.

BY JAMES C. WILSON, M. D.,

Physician to the Jefferson Medical College Hospital, and to the Philadelphia Hospital.

[Read January 3, 1883.]

I desire to lay before the college a plan of managing enteric fever, which I have employed during the past year, and which, tested by such uncertain but not necessarily fallacious means as are available for a limited series of cases, has yielded satisfactory results.

The object of this communication will, I believe, be best attained by first sketching in outline the plan of treatment itself, next by reviewing the considerations which led to its adoption, and finally by a brief study of the cases. This arrangement of the topics will enable us to economize time.

The Plan of Treatment.—The scope of this paper, and the necessity to be brief, debar me from the consideration of the general management of the patient, dietetics, the treatment of complications and sequels, and of the prophylaxis, and restrict me, in the main, to the subject of the management by medicinal means. It is, in fact, this part of the treatment that, superadded to the so-called rational and expectant method in general use in this community, differs from the common practice, and constitutes the plan in question.

So soon as the patient is found to have enteric fever, or in many instances so soon as his symptoms warrant a reasonable suspicion that he is about to develop it, he is put to bed, ordered a diet consisting of milk, animal broths, jelly and simple custards, in small amounts and at intervals of two or three hours. At night he is given a dose of calomel. This dose varies in amount from $7\frac{1}{2}$ to 10 grains (0.5 to 0.66 grammes) and is repeated every second evening until three or rarely four doses have been administered in the course of the first six or eight days. It is given alone or in connection with sodium bicarbonate. There is commonly a slight increase of diarrhœa, if it be present, without aggravation of the other symptoms, and in some instances the tendency of the temperature at this time to steadily rise, appears to be controlled. If, as is frequently the case, spontaneous diarrhœa has not recurred in the first week, the calomel usually brings about two or three large evacuations on the day following its administration, not more. In either case the tendency to frequent passages in the later stages of the attack is favorably influenced by the repeated administration of this drug during the first week. If the case does not come under observation until after the tenth day, one only, or at most two doses of calomel are given. No further doses of it are, however, given during the course of the attack unless constipation occur. In this event, if the evidences of extensive or deep implication of the intestinal wall, such as abdominal pain, tenderness or marked tympany are absent, calomel in $7\frac{1}{2}$ grain (0.5 gramme) doses is given at intervals of three or four days. If there

is reason to suspect serious intestinal lesions, the lower bowel may be more safely emptied of its contents every third or fourth day, by enemata of moderate size (8 to 10 fluid-ounces.) It is necessary to bear in mind that the gravest lesions of the gut, leading even to hemorrhage and perforation, have occasionally been observed in cases characterized, not only by constipation, but also by an entire absence of pain or tenderness, and very moderate tympany. The danger of salivation from calomel in these doses in enteric fever appears to be slight. In only one case in sixteen were the mercurial fetor and slight swelling of the gums observed.

Excessive diarrhœa has been controlled by the use of opium, either in suppositories, containing 1 grain (0.06 gramme), or by the mouth in quarter grain (0.016 gramme) doses, often associated with bismuth and given *pro re nata*. It is an invariable rule that the patient be kept in the horizontal position, and to the use of the bed-pan and urinal, from the time of the recognition of the disease until defervescence is completed. He is, however, turned upon his side from time to time, and made to maintain that position for twenty or thirty minutes, if necessary, being supported by the nurse.

From the beginning of the attack, the following mixture is readily administered in doses of one, two, or even three drops in a sherry-glassful of ice-water after food, every two or three hours during the day and night:

R.	Tinct. iodinii,	f ʒij.	8		00 c. c.
	Acid. carbolicæ liq.	f ʒj.	4		00 c. c.

M.

Unless some unusual circumstances occur to render a change necessary, this medicine is not suspended until the attack draws to a close. It is well borne by the stomach, and excites no repugnance on the part of patients. In one case only has it been necessary to omit the carbolic acid on account of the disgust assumed by its odor.

Partly for the sake of its favorable influence upon the skin, and for the sake of cleanliness, partly because of its favorable though slight influence upon the temperature, the patient is to be sponged twice a day with equal parts of aromatic vinegar or alcohol, and cold water. If it is more grateful to him, this sponging may be done with tepid water, the evaporation of an extensive film of water not below the temperature of his body probably being not wholly without a refrigerating tendency.

When the evening axillary temperature reaches 104° F. (40° C.), quinine in massive doses, 24 to 30 grains (1.66 to 2.00 grammes), is given upon a falling temperature. I usually direct 8 to 10 grains to be given in solution at 5, at 5:30, and at 6 a. m., the following morning. Administered thus at the decline of the temperature in its diurnal revolution, these large doses of quinine depress it from 2.5° to 3.5° F. (1.4° to 1.8° C.). After the lapse of forty-eight to seventy-two hours, if necessary, the dose may be repeated. If these doses be rejected by the stomach—an unusual circumstance—half the quantity of quinine may be administered hypodermically. For this purpose a citric acid solution is to be preferred. Since the adoption of the plan of treatment un-

der consideration, I have not encountered cases attended with such hyperpyrexia as has rendered attempts to control it by cold baths necessary or even advisable.

The minor nervous symptoms are best held in check by skilful nursing. For the relief of the headache of the first ten days absolute quietude, a dim light, etc., are often sufficient; occasionally the bromides alone or in combination with chloral are required. Later in the course of the disease chloral is unsafe. From the end of the first week the patient cannot be left unattended even for a few minutes, without risk. Persons in whom delirium was only occasional and transient, have in many instances destroyed themselves during the momentary absence of the nurse.

Alcohol is not often indicated prior to the beginning of the third week. It may, however, by reason of the habits of certain patients, be necessary throughout the attack. Although forming no essential part of the treatment, it is commonly administered in varying though usually small amounts towards the close of the sickness. Some patients do well without taking it at all. It is of course administered in accordance with well-understood indications upon the supervention of delirium, ataxic symptoms and the evidences of failures of the forces of the circulation. The patients are carefully watched well into convalescence, and cautioned against too soon regarding themselves as restored to health.

The dangers of the establishment of a focus of contagion are guarded against by the systematic, thorough disinfection of the stools immediately after they are voided.

The considerations which led me to adopt the plan of treatment indicated in the foregoing sketch, are:

1. A feeling of dissatisfaction regarding the expectant method of treating enteric fever. This feeling, vague at first, grew more definite and stronger with increasing clinical opportunities, and a fuller knowledge of the natural history of the disease, until it became a motive, impelling me to cast about for some different and more satisfactory plan. This feeling, has been during the past decade, a very general one in the profession in all parts of the world, as is attested by an almost endless succession of journal articles setting forth new plans of treatment, and the use of new drugs, in the management of this, the most common and most important of the acute infectious diseases of the present epoch in medical history. Most of the plans thus suggested have led to disappointment when tested by the fuller observations of the profession; many of them have failed to attract general attention, and some few are still *sub judice*. Their number and diversity bear witness to a wide-spread distrust of the once well-established expectant treatment. This distrust is, however, based upon something more tangible than a mere feeling of dissatisfaction. The statistics of all observers whose cases have been sufficiently numerous to be trustworthy, show enteric fever to be, when treated by the expectant plan, a disease of high death-rate.

The percentage of fatal cases rarely falls below 15 per cent., and often exceeds 25 per cent., according to the hospital records of this country, Great Britain, and Continental Europe. Jaccoud,

with a collection of 60,000 cases, observed a mortality of 20 per cent.; Murchison, in 27,051 cases, 17.45 per cent.; Liebermeister, in 1718 cases, at Basle, under an expectant plan, records 27.3 per cent. of deaths. But turning from broad generalizations to personal experience, who is there here that many times, elated by the happy issue of mild or average cases treated by the expectant plan, has not realized the sense of utter powerlessness attending it when he has stood face to face with cases in which to *do* rather than to *wait* has been necessary to save life.

2. Enteric fever is the very type of the general diseases, of affections *totius substantiæ*. The tissues are universally implicated in the morbid processes; no function of the body wholly escapes perturbation. For this reason plans of treatment suggested by the prominence of certain groups of symptoms, or by the known lesions of particular organs, even though of undoubted benefit as far as they go, are in theory unsatisfactory because they are directed in effect against conspicuous manifestations of the cause of the sickness, rather than against the cause itself.

Whilst in actual practice the treatment by turpentine, by alcohol, by opium with lead, or the silver nitrate, or by agents capable of controlling the febrile movement, as quinine, digitalis, salicin and the salicylates, even the cold-water treatment itself, although at times and in the hands of certain clinicians showing favorable results—all these have failed of general acceptance on the part of the profession.

3. The general character of the disease, the specific nature of its cause, the unsatisfactory results alike of an expectant and of a symptomatic plan of treatment, or rather of the two combined, have united to render the idea of a specific treatment, a true cure for enteric fever, a most attractive one, to stimulate thoughtful observers to renew again and again the disappointing search for it. To this idea may be traced the treatment by the mineral acids, by chlorine-water, by carbolic acid, by quinine alone, by quinine and digitalis, by iodine, by the potassium iodide, by calomel.

4. Not only is the conception of a specific treatment for specific diseases a most attractive one, and the attainment of such a treatment for enteric fever brought within the bounds of a reasonable hope by the analogy of syphilis and the malarial diseases, but the search after it with due caution and judgment has also the warrant of the very highest medical authority.

Passing by some earlier names, I refer to Da Costa, who has said: "It would be as illogical as absurd to suppose that we shall never possess the coveted means really to cure the continued fevers. Doubtless to the physicians of the time of Charles V. the radical and specific treatment of the malarial fevers appeared as hopeless and remote as the radical and specific treatment of the continued fevers appears to the scientific inquirer of our day."

I refer also to Liebermeister, who treating about 800 cases, part with calomel, part with iodine, had with the former drug a mortality of only 11.7 per cent. with the latter of 14.6 per cent. against 18.3 per cent. for cases treated without those remedies, but in other respects upon a similar plan.

Bartholow has also spoken in favorable terms of the treatment by iodine in combination with carbolic acid.

The treatment adopted is thus seen to consist of the use of the two remedies that are proved to exert a favorable influence upon the disease, iodine and calomel, with the addition of carbolic acid in minute amounts. I am aware that no positive conclusions as to the efficacy of particular plans of treatment can be deduced from a limited series of cases. I am also aware that few acute diseases show greater variations in intensity and in the percentage of mortality at different periods, and under different circumstances, than enteric fever. Nevertheless I have ventured to occupy your attention with this subject to-night, because the results of the treatment encourage me to hope that its discussion in this way will lead to its trial on a more extended scale. That it amounts to a specific treatment in the narrow sense, is not affirmed. It is tentative, provisional, but it is nevertheless to be regarded as a contribution to the subject of the specific treatment of enteric fever.

The total number of cases treated by this plan is sixteen: all recovered, one being now in the second week of convalescence.

Of these, eight were severe, the temperature reaching or exceeding 104° F. (40° C.).

Of these eight severe cases, one was characterized by uncontrollable vomiting in the third week. The patient retained no food taken by the mouth for five consecutive days.

One case was very irregular in its course, and was complicated by an obscure abdominal abscess which discharged by the bowel. The temperature in this case on two occasions attained 105° F. (40.5° C.). This case presented the characteristic eruption of enteric fever.

A third case was prolonged by a severe relapse.

Of the eight cases in which the observed temperature did not at any time attain 104° F. (40° C.), and which were therefore looked upon as medium or mild cases one was complicated by crural phlebitis, and another by the occurrence of intestinal hemorrhage.

The average duration of the eight severe cases was about 31 days; that of the eight mild and medium cases was about 25 days.

Of the whole number ten were treated in hospital, six in private practice. All from the time of their coming under observation were under my personal care.

In two cases the special plan of treatment was abandoned about the beginning of the third week, on account of the supervention of unusual symptoms of great gravity. These related respectively to gastric irritability and an obscure abdominal abscess.

These sixteen cases are unfortunately not a consecutive series. During the year in which I have had the opportunity of observing them, two other cases of enteric fever have occurred in my hospital practice, in which this plan of treatment was not employed. One was that of a man suffering from rheumatism, who, after a stay of several weeks in the wards, and in a bed near that occupied by a patient very ill of enteric fever, was observed to be febrile, and to have the typhoid eruption. This person, previously greatly re-

duced, was not regarded as a suitable subject for a special treatment, the efficacy of which was not yet established in my mind. The other was a man who, with an obscure history of a sickness of many weeks, and a very irregular temperature, developed the typhoid eruption, and within forty-eight hours had general peritonitis. These two fatal cases have however no bearing upon the result of the treatment.

In private practice several cases of mild continued fever of long duration were treated upon this plan during the past winter. I believe them to have been anomalous cases of enteric fever, but as the rose-spots of that disease were absent, and their departure from the typical disease was wide, I have not included them in the above collection of cases treated. They all recovered.

The result of this plan of treatment has not only been satisfactory in respect of the recovery of all the cases treated, an accidental circumstance not liable to mislead persons familiar with the disease, but it has also been satisfactory in respect of the general course of the attack, and the appearance of the patient. These were in the main, despite the severe type of the disease in several of the cases and despite the occurrence of grave complications, favorable. I make this statement with due regard to the personal equation, and with no willingness to permit the observed fact to differ from the actual fact; for I desire any who may make trial of this plan to be more favorably impressed with the results of it, than they have been impressed with my account of it.

After the reading of the preceding paper:—

Dr. George Hamilton spoke of the great importance of preventing hypostatic congestion by changing the position of the patient from time to time. This was one feature of the plan of treatment recommended some time ago by Dr. Wm. Pepper, in typhoid fever, by which he obtained the unequalled result of 98 per cent. of recoveries. He was not, however, at the time, able to recall in detail the method of treatment.

Dr. J. T. Eskridge stated that the treatment to which Dr. Hamilton referred consisted in the administration of nitrate of silver, and was that which had been introduced by the late Dr. J. K. Mitchell some years ago.

Dr. Roberts Bartholow said that the plan of treatment of typhoid, advocated in the very interesting and able paper just read, is, as all present probably know, in part, the so-called "specific" method. The administration of calomel in full purgative doses during the first week serves a double purpose: it has an effect on the range of temperature, and it acts on the typhoid germs present and multiplying in the intestinal canal. The use of iodine—usually Lugol's solution—throughout the disease, is also one mode of the specific treatment. By the use of this medicine, it is attempted to prevent the multiplication of germs in the intestine, to check fermentation, and to maintain an antiseptic action in the blood.

Although the existence of typhoid germs has not been proved, it must be regarded as possible. Klein, a few years ago, announced the discovery of the specific organism of typhoid in the affected intestinal glands, but Creighton of Cambridge showed that the supposed germs were produced by the mode of preparation. This *fiasco* threw

great discredit on the whole question of germs. Nevertheless, the course of treatment directed against supposed germs—the antiseptic method—has had a most favorable influence on the progress and mortality from typhoid. Whilst the specific plan has been advocated in Germany, the Montpellier school have brought forward carbolic acid as the remedy, and the success which has attended the use of this remedy has been really remarkable. Quite a different complexion has been put on the statistics of mortality since they began the use of carbolic acid. It is probable that the combination of carbolic acid and iodine gives better results than the use of either singly. According to my observation, this method of treatment diminishes the diarrhoea, lowers the fever, and renders the disease much less violent, consequently lessening the mortality. Dr. Wilson has, therefore, rendered us a real service by drawing attention anew to this plan of medication, and especially by supporting his position with valuable cases and statistics. Besides this use of medicines, Dr. Wilson's treatment contains many valuable suggestions and practical methods, which, no doubt, contribute materially to his success.

Dr. J. M. Da Costa spoke of the purgative

treatment in enteric fever, as that which had been tried in the French Hospitals and for a time sanctioned by Louis. As regards calomel it was partly by its purgative action that it was supposed to be beneficial. In his hands the calomel treatment had not yielded favorable results. He had found carbolic acid useful in controlling diarrhoea and in lowering the temperature. He had also employed thymol in one-half to one grain doses. He suggested the use of this remedy in the place of carbolic acid, as more acceptable to the stomach.

Dr. Wilson, in reply to the question of Dr. Hamilton, said that he considered it necessary to frequently change the position of the patient to prevent pulmonary hypostasis. He had intended to emphasize this point in his paper. He called attention to the fact that carbolic acid and like drugs probably exert a favorable influence upon the course of enteric fever by their power to stay the rapid decomposition of the intestinal contents, which, for lack of the antiseptic influence of the intestinal juices, the bile, etc., all of which are changed, is a secondary cause of irritation, diarrhoea and tympany. Calomel also, he thought, probably exerted an indirect beneficial influence in the same direction.

EDITORIAL DEPARTMENT.

PERISCOPE.

Physical Exploration of the Lungs by Auscultation and Percussion.

We should recognize the fact that the signs obtained by means of auscultation and percussion are not directly diagnostic of peculiar diseases, but that they represent abnormal physical conditions which are common to a greater or less number of different diseases.

To establish, says Prof. Austin Flint, *Medical News*, January 6, 1883, physical diagnosis purely on the basis of principles of physics, is to build upon a sandy foundation; he would explain by physics simply the connection existing between morbid physical conditions and their representative signs. Many of the most important signs may be studied in healthy and diseased lungs removed from the body.

We should recognize individual physical signs as such only when their constant connection with distinct abnormal physical conditions has been established; by so doing, we would have a security against an undue multiplication of signs by individualizing sounds which may be variations of established signs.

As far as may be, the differential characters of different signs should be distinct, clear, and simple.

Intensity, pitch, and quality are the points on which the distinctive characters of the sounds obtained by auscultation should be based.

The duration of the sound, the rhythmical succession of respiratory and expiratory sounds, and the apparent distance from or nearness to the ear of the listener, are all minor points not to be overlooked.

The nomenclature should be clearly and correctly expressed; it should also be uniform, "consonating," "full," "empty," "indeterminate," "wooden resonance," "band-box resonance," are all objectionable, but especially so in the designation of signs after those who have described them, as Williams, Skoda, Gerhardt, Buriner, and Winternitz.

"When it is considered that all the knowledge furnished by percussion, which is available in the physical diagnosis of pulmonary diseases, may be comprised in four signs, one is led to exclaim, What is to hinder the possession of this knowledge to the fullest extent of every practitioner? There is no hindrance beyond unanimity in the recognition of the existence of these signs, and that practical acquaintance with their differential characters, which requires but a very moderate amount of time and attention. Arranged in pairs, the four signs are: 1. Flatness and dullness. 2. Tympanitic and vesiculo-tympanitic resonance." Flatness and dullness are simply degrees of the same morbid physical conditions. Flatness is absence of sound; there are, of course, no degrees or varieties of flatness.

In dullness, the resonance is more or less diminished; "in dullness the pitch of the sound is invariably higher than that of the normal reson-

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ance of the person examined ;" this is important in recognizing slight degrees of dullness.

Tympanitic and vesiculo-tympanitic resonance relates to quality of sound.

There is absence of the vesicular quality of normal resonance, in tympanitic resonance; a resonance in which the vesicular quality is absent is always tympanitic.

It does not follow that a resonance, in order to be tympanitic, must be louder than the normal resonance; but a tympanitic resonance is invariably higher in pitch than the normal resonance; the contrary is, however, stated by many writers. Other things being equal, the pitch is lowered, the larger the free space containing air; a practical point of importance pertaining to tympanitic resonance, is its ready conduction for a greater or less distance beyond the limits of the space whence it comes.

A practical point in developing the cracked-metal resonance is, that the intonations may very often be perceived by the ear close to the open mouth of the patient, when otherwise they escape observation.

Vesiculo-tympanitic resonance is distinguished from the normal resonance by the presence of more or less of the tympanitic sound, by greater intensity, and by a higher pitch. It is the sign of pulmonary emphysema, "there is a liability to error in the non-recognition of this sign in certain cases of pulmonary emphysema; and consequently to an unfortunate mistake in diagnosis. As a rule, in emphysema, the upper lobes of both lungs are affected, and the lobe of the left is to a greater degree than that of the right lung. Now, under these circumstances, the upper lobe in both lungs yields a vesiculo-tympanitic resonance, but this sign is more marked on the left than on the right side, the difference corresponding to the difference in the degree of emphysema. The error is in regarding the lesser degree of resonance on the right, compared with the greater degree of increased resonance on the left side, as dullness which, taken in connection with the symptoms, would point to a phthisical affection." This mistake is not infrequent.

Pyæmia from Syphilitic Bone Disease.

From the *Medical Times and Gazette*, December 30, 1882, we learn that before the Pathological Society of London, Mr. Victor Horsley related the case of a man who came under his care with eleven large abscesses in the cellular tissue, secondary, he believed, to necrosis of his frontal bones. At the post-mortem examination there was found to be acute necrosis of the malar, frontal, nasal, and inferior turbinated bones; the frontal bone was also excessively sclerosed. The mucous membrane of the nose and pharynx showed acute hyperæmia and recent ulceration. The lungs were somewhat cirrhotic at the apices. The brain contained an excess of cerebro-spinal fluid; the arachnoid and pia mater at the base were opaque and milky; the left lobe of the cerebellum was congenitally deficient, the flocculus being absent. The ventricular surfaces of each cusp of the aortic valves were ulcerated and covered with a layer of fibrin, which he regarded as pyæmic. The interesting point was that there

was no visceral lesion of pyæmia, except the heart affection. He also showed some micro-organisms found in an abscess in another case of pyæmia. In regard to the presence of these organisms, he recollected a case of pyæmia in which they were found, and as the patient improved they diminished in number in the newly-formed abscesses, until before his recovery they had quite disappeared.

REVIEWS AND BOOK NOTICES.

NOTES ON CURRENT MEDICAL LITERATURE.

—Medical journalism is as popular a field as ever. The *Medical Age*, Vol. I., No. 1, comes to us from Detroit. It is edited by Dr. J. J. Mulheron, who is no novice to the pen, and published by George S. Davis, as a semi-monthly.

—*Godey's Lady's Book* for February contains the usual amount of matter interesting to the domestic circle.

—Dr. Wade Minor Logan, of Cincinnati, has reprinted his articles on the "Curability of Consumption" in a pamphlet of 20 pages, with illustrations. Price 10 cents. His views merit consideration.

—The New York *Medical Journal*, formerly a monthly, has become a weekly. We are informed that to take its place another monthly is projected in New York. There is a definite field for a monthly medical journal, and in some respects a better one than for a weekly. The monthly is the proper medium for long, serious, studied articles, and we hope that New York will appreciate this.

—The New York *Medical Record* is emulating the blanket sheet dailies, and has extended its superficial area. It is determined to give more square inches of printed paper than its competitors.

BOOK NOTICES.

American Hero-Myths. A Study in the Native Religions of the Western Continent. By Daniel G. Brinton, M. D. etc., H. C. Watts & Co., Philadelphia, cloth 8vo., pp. 251. Price \$1.75.

The Maya Chronicles. Edited by Daniel G. Brinton, M. D., etc., Philadelphia. Published by the editor. 1 vol., 8vo., pp. 278. Price \$3.00.

Some wise man has given the advice that every professional worker should also cultivate some branch of study outside of his profession, to which he can turn for change of mental activity. This has evidently been the theory followed by the

senior editor of this journal, as the two handsome volumes named at the head of this notice abundantly testify. They are contributions to a field of learning in which he has already become pretty well known, to wit, the history, myths, and languages of the aboriginal inhabitants of America.

The "Hero-Myths" deals with a series of traditions which appear to have been found over both North and South America, all very much alike, though told by tribes wholly apart in language, in culture, and in location. The hero of the myth is the venerable man to whom the tribe attributes its political organization, such as it was, its religious doctrines, and its knowledge of the arts of life. He was generally supposed to have come from the east, and at the conclusion of his mission returned there, not to die, but to remain for a time, and was expected back again some day. What is curious is that he was very often spoken of as a white man and bearded, and this by tribes who had no knowledge whatever of the existence of a white race of men. Dr. Brinton explains these singular facts by an ingenious hypothesis, too extended to give here.

The "Maya Chronicles" is a publication entirely for specialists. A member of the profession, the late Dr. C. H. Berendt, obtained, while traveling in Yucatan, copies of some ancient manuscripts in the language of the natives of that country, the Mayas. They contained, among other records, five brief chronicles of the nation, carrying its history back about to the beginning of the Christian era. On the death of Dr. Berendt, these manuscripts were secured by Dr. Brinton, who studied the Maya language sufficiently to make translations of these chronicles; and he has published them in this volume in the original tongue, with his rendering into English, and backed by an introduction and an ample apparatus of notes, philological and historical. Any one touched with the mania of the antiquary, will find here solid food enough to give him a full meal. M.

A Text-Book of the Diseases of the Ear and Adjacent Organs. By Dr. Adam Politzer. Translated and edited by Dr. James P. Cassells. Phila., Henry C. Lea's Son & Co., 1883. Cloth 8vo., pp. 800.

The name of Dr. Politzer is indissolubly associated with the progress of aural surgery during this generation. The treatise which he has written on this branch has long been a standard in Germany; and this translation of it, with the author's approbation, and by one of the most eminent aurists of Great Britain, will certainly take

rank as a standard work of reference for years to come.

The volume begins with a complete exposition of the anatomy of the ear and the physiology of audition. Then follows a discussion of the diseases of the several portions of the organ, the middle ear, the mastoid process, the internal ear, etc. Injuries of the organ, and the relations of ear-disease to life assurance, are also treated of. The book closes with chapters on malformations of the ear, deaf-mutism, hearing instruments for the deaf, and a satisfactory index.

The text is elucidated by more than two hundred and fifty illustrations, and the manufacture of the book is generally quite satisfactory, though some of the cuts are not quite all that one could desire.

Early Aid in Injuries and Accidents. By Friedrich Esmarch. Translated from the German by H. R. H. Princess Christian. Philadelphia, H. C. Lea's Son & Co., 1883, 8 vo. clo., pp. 117.

There is in Germany a so-called "Samaritan Society," whose members fit themselves to render aid in the accidents and emergencies of life and in sickness. It was founded, we believe, by Prof. Esmarch, and this volume contains the translation of five lectures which he delivered before it.

The first lecture gives a popular synopsis of anatomy; the second, third and fourth are on various injuries; and the fifth is on transport of the sick and wounded.

While they contain nothing which is not familiar to professional men, they present in a clear manner a great many points which it were well for all to know who are liable to be called upon to aid the injured and sick—and who is not?

Hygiene and Sanative Measures for Chronic Catarrhal Inflammation. Second edition. By Thos. F. Rumbold, M. D., St. Louis. Medical Journal Publishing Company, 1882.

As a specialist on catarrh, Dr. Rumbold ranks among the first we have in this country. The appreciation of his works is shown by the appearance of this second edition, the first having been exhausted in less than a year.

The present one has been rewritten and material additions made. The author has no specifics to recommend nor mysterious cures to report, but distinctly lays down the principle, which all scientific physicians will endorse, that the most successful treatment of chronic catarrhal affections is "through the enforcement of proper hygienic measures."

The work has a number of illustrations, and is well printed and bound.

THE
Medical and Surgical Reporter,
A WEEKLY JOURNAL,
ISSUED EVERY SATURDAY.

D. G. BRINTON, M. D.,
JOSEPH F. EDWARDS, M. D., } EDITORS.

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THE
QUARTERLY COMPENDIUM
OF
MEDICAL SCIENCE.

With January 1st, 1883, the COMPENDIUM OF MEDICAL SCIENCE, formerly published half yearly, has been commenced as a *quarterly*, to be issued on the 1st of January, April, July, and October.

It is especially adapted to be taken with the REPORTER, as few or none of the articles in it appear in our weekly journal.

The price of subscription remains the same, \$2.50 per year. But as a special inducement to subscribers to the REPORTER to take the COMPENDIUM also, we offer the two journals at the very low price of

SIX DOLLARS,

when paid for *strictly in advance* and directly to this office.

THE SANITARY INSPECTION OF SCHOOLS.

The fate of the future is held by the children of the present age, and it is this consideration which should be ever present with legislators and those who pursue state-craft. They have no more solemn duty than to provide every wise facility that these children be educated in sound moral principles, solid intellectual culture, and the most judicious physical surroundings.

It is a pleasure to record that the citizens of Ohio appear to appreciate this axiom of a free government.

The following amendment of one of the revised statutes (section 2135) is now before the Legislature of that State, and no doubt will be passed without difficulty. The portion in brackets is the amendment proposed:

SEC. 2135. The Board of Health may take measures and supply agents, and afford inducements and facilities, for gratuitous vaccination and disinfection, may afford medical relief to and among the poor of the corporation, as in its opinion, the protection of the public health may require; and during the prevalence of any epidemic, may provide temporary hospitals for such purposes [and the said Board is hereby required to inspect semi-annually, and oftener if in the judgment of the Board it shall be deemed necessary, the sanitary condition of all schools and school buildings, within the limits of the corporation].

All who are interested in the future of the enlightened State which has thus taken an efficient measure to provide for the physical welfare of its school children, will read the above with pleasure.

It is clearly not sufficient to leave such an important matter as the hygienic condition of schools to chance visits of competent persons, or to occasional inspection by school boards. The latter, however well intentioned, have not the special training needed.

Still more deplorable is it when through neglect of preventive measures an epidemic breaks out in a school. Every parent is interested in this question, every community should feel it as a personal matter. The sad loss of the bright faces around the family board will be a matter of lasting self-reproach to those who are indifferent to claims on their attention like these.

We confidently expect that Ohio will promptly

adopt this amendment, and we feel that by so doing it will set a noble example to many other States.

A FOOLISH EXPERIMENT.

A man in New York has gained a certain amount of notoriety by making a wager that he would eat thirty pairs of quail in thirty consecutive days, one pair each day. That nothing is to be gained to science by this experiment, whether it succeeds or not, is self-evident, and we suppose the party interested cares not, so long as he wins his wager. But a man ought not to be allowed to thus foolishly trifle with his stomach.

Were he to try how long a man could live on any one exclusive article of diet, and place himself under the care of an intelligent physician, for observation, while so experimenting, he would prove a benefactor to science. Such meaningless exhibitions are useless and disgusting.

A STATE BOARD OF HEALTH AND ITS DUTIES.

It is to be hoped that no further delay will take place in organizing a Board of Health in this State. That it has been delayed this long is a disgrace—neither more nor less—and a discredit to the Commonwealth.

The bill now before the House of Representatives is a well-matured one, and should be promptly passed.

The duties of such a Board of Health, embracing as the field of its operation the whole State, are of vast importance to the people. Their health, their lives, and consequently their prosperity and happiness, are protected and advanced by the judicious exercise of the powers of such a sanitary body.

This is conceded on all hands when it refers to the crowded areas of cities, and it is not a whit less true when it is applied to rural districts. The difference is only that in the one instance the benefit is palpable, and immediately before the eyes of thousands; in the other it is just as real, but there are fewer to note it.

A Board of Health should stand in close relation to the medical profession. In no sense should it

be a political machine, nor should it have the immediate expenditure of much money. It should be observant and advisory, and its opinions should be heeded as those of unbiased experts.

It is quite proper that it should have the general supervision of medical practitioners, and be the body which officially decides on the propriety of admitting applicants to practice. In this view the following bill now before the Legislature deserves the support of the profession:

An Act Supplementary to an "Act to Provide for the Registration of all Practitioners of Medicine and Surgery."

SEC. I. *Be it enacted, etc.*—That the duties imposed upon the Faculties of the Medical Colleges and Universities in this Commonwealth set forth in the fourth section of an "Act to Provide for the Registration of all Practitioners of Medicine and Surgery," approved June 8th, 1881, are hereby transferred to and imposed upon the Board of Health of this Commonwealth; in like manner the duties imposed upon medical practitioners set forth in the same section of said act are hereby extended to and imposed upon all persons who may desire to commence the practice of medicine or surgery; and said Board of Health being satisfied as to the genuineness of the Medical Diploma presented to them for inspection, and also being satisfied as to the qualifications of the holder of such diploma to practice medicine or surgery, shall direct their secretary to endorse the same; after which the prothonotary may register such practitioner as indicated in said act of Assembly.

SEC. II. Said Board of Health shall have the supervision of the registration of all practitioners of medicine and surgery; they shall appoint a committee in and for each county, to be composed of three or more resident practitioners, whose duty it shall be to prepare a report in such manner and as often as may be ordered by said Board of Health, giving in it the condition of the Medical Register of their county; they shall make affidavit before the prothonotary of their county that the report is correct and true, and shall forward the same to said Board of Health.

SEC. III. If any practitioner has registered or shall register the degree of Doctor of Medicine, and has set forth or shall set forth that the same has been conferred by a medical society, or by an institution which has had a doubtful or precarious existence, or by an institution whose name does not indicate that it has been or is a medical college or university, and it cannot be ascertained that lectures on Human Anatomy, Human Physiology, Materia Medica, Chemistry, the Practice of Medicine and Surgery and Obstetrics have been regularly delivered in such institution, said Board of Health shall notify such practitioner to appear before them, and to present for inspection his or her medical diploma, together with any catalogue or announcement by which information may be given concerning such institution; and the practitioner, failing to show that his or her diploma was issued by a legally-chartered medical college or univer-

sity, and obtained in a regular manner, as provided in said act of Assembly, said Board of Health shall direct the prothonotary to cancel such registration.

It is further specified that the registration of physicians, who practice without a diploma shall cease in three months from the passage of this act.

As other states are busy purging from their confines the unworthy parasites of the profession, who batten on the public and bring discredit on medicine, so we hope that Pennsylvania will no longer be a laggard in this race for advancement.

We ask all our readers in this State to help along the good cause by personal appeals to their representatives.

THE NEW CODE OF ETHICS.

Notwithstanding the fact that numerous County and State societies, as well as the American Medical Association itself, have placed the seal of disapproval upon last year's action of the New York State Medical Society in allowing its members to meet in consultation with Homeopaths; and in spite of the fact that the Homeopaths themselves have not seemed generally overjoyed by this action; yet the New York County Medical Society, at a largely-attended meeting last Monday evening, defeated, by a large majority, a motion to instruct their delegates to the State Society to vote to rescind the innovation, and by a very large majority endorsed last year's action.

This seems very much like the story of the obstinate jury, wherein *eleven* men were reported to be so *perverse* that they actually stood out against *one*.

We trust the American medical profession will be equally obstinate, and will at Cleveland repeat the lesson it read at St. Paul.

It is but just to note that the leaders of the profession in New York city, such men as Sayre and Flint, bitterly denounce the action of the County society.

—The scientific world and the many friends of Professor Owen will be sorry to learn that the state of his health is such as to cause great anxiety.

NOTES AND COMMENTS.

Paralysis After Fracture.

At a recent meeting of the Société de Chirurgie, M. Trelat presented a patient who was brought to his service with a fracture of the femur and of the left forearm. The usual apparatus was employed. Towards the end of May it was found that the patient was affected with complete radial paralysis of the left forearm; the callus was exuberant.

On June 1, an incision was made over the callus, and after considerable difficulty, the radial nerve was found compressed in an oleo-fibrous canal towards the superficial surface of the callus. The nerve was disengaged with the chisel and mallet, and the surface of the callus resected.

From previous experience, M. Trelat did not expect any immediate favorable result, and no movements were observed until two months later; after that, a period of two months passed before the paralysis completely disappeared.

An Improved Vaginal Douche.

The Boston *Medical and Surgical Journal* contains an article, by J. B. Gerould, M. D., upon an improved method of the vaginal douche. Dr. Gerould says that this practice is not extensively used outside of hospitals, and that the apparatus for its execution is too expensive for many. He deprecates the use of pillows, rubber cloths, chairs, etc., because the patient is overcome by the "manifold directions," and generally saturates herself and surroundings with water, and from this cause becomes disgusted with the treatment. There is considerable truth in the doctor's deductions, but we cannot see that he makes the matter much plainer as regards *manifold directions*. An ingenious and simple contrivance described by the doctor is no doubt very efficient, but its manifold directions seem confusing, viz.: blanket, syringe, chair, hot water, board constructed as follows: either pine or white wood, from ten to twelve inches long, ten inches wide; on under side of which two strips, two and a half by twenty-four inches, are nailed; uniting the two free ends is a short strip which hooks over round in chair, thus preventing slipping. It is not necessary to mention the other half of directions; but besides these, a skillful gymnastic movement must be performed in order to mount and start the stream. Taking everything into consideration, it seems as if a fairly interesting case of hysteria might be originated by these *manifold directions*. But the doctor's idea is good.

Early Diagnosis of Pulmonary Tuberculosis.

The *Medical News*, in an extract from *L'Union Médicale*, says: "That more value than has heretofore been believed can be attached to the presence of anomalous respiratory movements in the early diagnosis of tuberculosis of the lungs; and when the irregularity is localized in the apex of the lung, particularly on the left side, and is permanent, it permits of a positive diagnosis, seen in the absence of other signs, such as crackling or alterations in the vocal fremitus or pulmonary resonance. These respiratory anomalies, in the order of their importance, are rough and deep inspiratory murmur, feeble and jerky respiratory movements. Harsh and deep-toned inspiratory murmur is the most valuable sign, as it is the earliest which appears."

These points, which Dr. Grancher calls attention to are of undoubted value to the early diagnosis. The only point on which we would differ is the fact of the doctor laying particular stress on the localization of these anomalies in the left apex: private statistics of ours on a hundred cases of early or incipient phthisis show quite a respectable majority in which these signs were confined for a time to the right apex alone, the left only becoming tuberculous after a time.

Ether Injections vs. Transfusion.

From the *Gaz. des Hôp.* we learn that Professor Hayem recently read a paper before the Académie de Médecine, in which he related the results of his experiments, in controversion of the accuracy of Prof. Verneuil's statement that transfusion is a useless operation, which may be superseded by hypodermic injections of ether. Having bled a dog almost to the point of death, he found that the injection of ether was attended with no durable effect, while transfusion produced a "true resurrection." When a large quantity of blood was withdrawn, the dilution of what remained by the transfer of the serum derived from another dog was also attended with the same success. The stimulation by ether only produces an increase in the energy of the cardiac contractions and a notable increase in the number of the pulsations, but does not give rise to any increase of the pressure of the blood nor of the rectal temperature.

Pelletierine and Kouso.

In a recent discussion in the Soc. Médicale des Hôpitaux, M. Laboulbène, in answer to a question on the subject by M. Féréol, said that he had always found Tanret's Pelletierine successful for the expulsion of tania, but he considered the usual

dose (grains 3 to 5) rather feeble, and generally gave 7 grains. The drug should be given in doses sufficient to induce vertigo and nervous phenomena. It was the opinion of most of the members (Dujardin-Beaumetz, Tenesson, Mesnet) that a purgative, castor oil or a black draught, should be given half an hour after the administration of the anthelmintic.

In one case where Pelletierine proved unsuccessful, a druggist took pepsin and passed the tania in a softened mass. M. Laboulbène remarked that kouso when fresh is purgative and anthelmintic, but the active principle is a glucoside which becomes altered with time.

Pregnancy.—Cancer of Cervix.—Cæsarian Section.—Recovery.

Dr. Edis presented this case to the Obstetrical Society of London, and we take the report from the *Lancet*, December 30, 1882:

"The patient came to Middlesex Hospital in November, 1881. She had begun to suffer pain, hemorrhage, and discharge eleven months previously. She presented the signs of six months pregnancy, and there was epithelioma involving nearly the whole circumference of the cervix and the greater part of the posterior vaginal wall. Palliative treatment was adopted until February, 1882. Labor pains then came on, and the os dilated to the size of a five-shilling piece. It being judged impossible for delivery *per vias naturales* to take place, Cæsarian section was performed by Dr. Morris. The child was born in a state of suspended animation, but recovered. The mother recovered, and when seen in September the disease had made but little progress.

CORRESPONDENCE.**Hæmaturia—Diphtheria—Typhoid Fever.**

ED. MED. AND SURG. REPORTER:—

I think I have made a discovery. We had during the past summer many severe cases of hæmaturia with intermittent and congestive type of fever. I found that quinia alone did not succeed well. But with the infusion of the spice-wood, benzoin odoriferum, as a drink in the place of water, as much as two or three cups full every day would soon control the hæmaturia. Since I have treated several milder cases of hæmaturia with the spice-wood tea, I am persuaded from my 9 months experience with the remedy that it is worthy of confidence in bloody urine, particularly if all complications are remedied.

I see so much written about diphtheria, sore throats and the like, and the prescriptions given—may I add one to the list that has never failed

me, if the remedy touches the ulcer or part inflamed :

R. Potass. chlor.,	3jss.
Argenti nitratis,	gr. x to xx.
Tr. opii,	3j.
Acid. carbol.,	gtt. xxv.
Aq. rose,	ad 5vj.

Directions.—Gargle or touch the surface every four to six hours.

Another: In our typhoid type of fever that drags along so slowly—(after all complications removed, if any) and with just oil enough to regulate the bowels—(sometimes the discharges are small and too frequent, etc.) I consider the following a panacea, changing ingredients as required.

R. Ol olivæ,	
Tr. opii camph.	
Spts. atheris nitrosi,	aa 3 ss.
Acid. carbol.,	gtt. xxv.
Aq. tamarind,	ad 5vj.

M. Sig. 1 tablespoonful every 3 hours.

One can see a benefit in the course of 36 hours.

Louisiana.

R. M. NICHOLS, M. D.

The Opium Habit.

EDS. MED. AND SURG. REPORTER:—

I have seen and read much of the distressing effects of the morphia habit; and I know of a case that is an unusual one to me, and I write to know if you or any of your readers have met any similar.

A young man of nervous temperament, delicate, about 35 years of age, had used from two to three drachms of sulphate of morphia per week for over two years. He quit taking it some four weeks ago—stopped it at once, without any inconvenience or the ill effects so usually experienced from its use. Had no effect upon him perceptible. Says he feels as well as ever he did in his life, and has from the day he stopped. Why does its effect vary so much in different individuals? Any light that I can procure on this subject would be gratefully received by me.

W. S. MARTIN, M. D.

Kingwood, Preston county, W. Va.

NEWS AND MISCELLANY.

The National Association for the Protection of the Insane and the Prevention of Insanity.

The annual meeting of this Association was held in this city on Thursday, January 25, 1883. Dr. Joseph Parrish, of Burlington, N. J., presided, and Miss A. A. Chevallier, of Boston, acted as secretary.

Dr. S. D. Gross delivered an address of welcome, in which he pictured in eloquent words the misery of the insane and the nobility and grandeur of the effort to prevent insanity and to protect the insane. In the State of New York alone there are upwards of 10,500 insane locked up. The great duty of those interested in this cause, in Dr. Gross' opinion, is the proper classification of the insane, and a decision as to how they should be treated in and out of the asylum, and whether with medicine and restraint. He called attention to the few recoveries recorded among the insane, and referred to the necessity of prompt attention to the subject

of restraint, numerous frightful occurrences among patients injudiciously allowed their freedom making this imperative.

Professor Traill Green, of Easton, followed Dr. Gross in a paper on the functions of a medical staff of an insane hospital. He said that the last census showed that there were 37,000 insane and 24,000 simple-minded people in the United States; but he believed these figures were far below the actual ones, and that there were 100,000 insane persons. If there were only 50,000, the matter was one which claimed attention. He condemned the present management of our insane asylums in regard to their limited medical staff. In most of the asylums there are only two physicians to 400 and even 600 patients; whereas in the Pennsylvania Hospital for the Insane, Dr. Kirkbride has had for the past five or six years one physician to every 86 patients. Why cannot the State do the same? Dr. Mary Jacoby strongly confirmed Dr. Green's views.

Dr. Gross submitted a resolution, as follows:

WHEREAS, Numerous facts have recently been brought to light tending to show that insanity in women, in many of its worst and most embarrassing forms, is caused by sexual diseases, often of a curable nature; therefore be it

Resolved, That it is the deliberate opinion of this association that there should be upon the professional staff of every insane asylum a thoroughly trained gynecologist, competent to make all necessary examinations of, and perform all operations on, women with sexual maladies.

After some discussion, the resolution was adopted.

Dr. Charles K. Mills read a paper on "The Duty of Medical Colleges toward Mental Disorders." He said:

The number of insane people in 1880 was between 89,000 and 96,000, or 1 to every 520 of the population. There is great need for larger asylums, and greater necessity for more and better persons to take charge of them. Diseases of the mind should be the subject of special study in our medical colleges. At present they are limited to one or two lectures, and they are didactic. In my opinion they should be clinical. The University of Pennsylvania and Jefferson College should have departments in their hospitals for insane patients, with whom the students can be brought into daily contact. Attendance on the lectures should be compulsory. Physicians, wherever they practice, may have them to treat; they may be called upon to sign certificates of insanity or pass upon a patient's lunacy; in short, it is a matter of the most vital import.

Dr. Joseph Parrish read a paper on "How to Protect the Insane," in which he deprecated the building of any more asylums, and advocated the placing of the insane and inebriates in cheerful homes.

Dr. Dana offered a resolution of regret at the recent death of Dr. George M. Beard.

Miss Chevallier recommended the appointment of a temporary lunacy commission, to go to Congress and urge the creation of a permanent one.

A resolution by Miss Chevallier, petitioning every college to have a course of clinical and didactic lectures on psychiatry was adopted.

The Society then adjourned to meet at 8 p. m.

In the meanwhile Dr. Gross entertained the members at his home.

At the evening session the Rev. R. Heber Newton, of New York, read a paper on "The Obligations of the Sane towards the Insane"; in the course of which he dwelt upon the incarceration of sane persons for family purposes.

At the conclusion of his address his remarks were challenged by Dr. C. K. Mills, Frank A. Wells, Dr. Atlee, of the State Hospital at Harrisburg, and Dr. Morton, of the Pennsylvania Hospital.

Dr. Atlee said there may be many cases where sane persons are unjustly incarcerated in asylums in New York—in fact, the papers are full of such stories; but in Pennsylvania we can take care of our institutions and ourselves.

There was an evident disposition to carry the dispute to personalities between Philadelphia and New York, and Dr. Parrish, the President, was compelled to end the matter by ordering the discussion closed.

Clark Bell, a New York lawyer, read a long paper on the "Legal Rights of the Insane," that touched on every side of this aspect of the case—the principal point urged being as careful a supervision of the superintendents as was exercised over the patients themselves.

The officers elected for the year are: President, Dr. Joseph Parrish; Secretary and Treasurer, Miss A. A. Chevallier; Executive Committee, Dr. Parrish, Miss Chevallier, Clark Bell, Dr. William B. Atkinson, Dr. C. K. Mills.

The Association adjourned.

Officers of the Northern Medical Association of Philadelphia for 1883.

President.—Dr. J. T. Eskridge.

Vice President.—Dr. Henry Beates, jr.

Recording Secretary.—Dr. I. G. Heilman.

Corresponding Secretary.—Dr. Ida E. Richardson.

Reporting Secretary.—Dr. Henry Beates, jr.

Treasurer.—Dr. L. Brewer Hall.

Counsellors.—Drs. Jas. B. Walker, Edward R. Stone, Robt. J. Hess, Henry W. Rihl, Daniel Longacre.

Another Cremation.

On Friday, January 26, the body of a child three years old was cremated in the Le Moyne furnace at Washington, Pa. The subject is the child of Dr. Samuel Holm, of New York, who himself was cremated in the same furnace in 1880.

Personals.

—A physician in this city was lately sued for malpractice in the treatment of warts! He made a successful defence.

—Dr. Oliver Wendell Holmes has not lost his inclination for dining out, and his hosts find the autocrat's inexhaustible table-talk as brilliant and good-humored as ever.

—A man calling himself Dr. C. L. Blood, publisher of a book called *A Century of Life, Health, and Happiness*, was recently arrested in this city on the charge of defrauding by means of false pretences.

—Dr. R. S. Sutton, whose studies in abdominal and pelvic surgery have already gained him a widespread reputation, returns from Europe in a few weeks, after passing eighteen months in the examination of foreign methods of teaching these branches.

Items.

—Dr. S. Pollak, in the St. Louis Medical Society, reports a case of sciatica promptly and permanently relieved by the hypodermic injection of ice-cold water. The needle of the syringe was buried deeply in the tissues.

—There are thirty-four or thirty-five counties in New York State that have voted against the new code, to three or four in favor of it, or of no code at all.

—Spanish physicians are not allowed to practice their profession in Lisbon, although Portuguese doctors are freely admitted in the cities of Spain. This lack of reciprocity is causing a commotion among the Dons.

—To promote the growth of the hair, Professor Ratlin, of Leipsic, recommends (says the *Pharm. Zeitung*) a mixture of 10 parts of tincture of capsicum with 50 parts of glycerine.

—An Obstetrical Society was recently formed in Washington city, Dr. S. C. Busey, President.

—Dr. Hughlings Jackson, in a recent address, says very truly that too much specialism in teaching tends to produce prigs rather than practitioners.

—The *Quarterly Journal of Inebriety* for January, 1883, says: "A man who becomes an inebriate after forty years of age, is always the victim of some profound disturbance of the nerve centres. Some condition of disease or exhaustion is present, that has broken up the normal integrity of the brain centres, and demands alcohol simply because it brings relief to this state of irritation."

—At the close of Dr. Morell Mackenzie's lecture at the Bellevue Medical College, New York, one of the students from "out West" remarked to his neighbor, "That feller talks our language very well for a foreigner."

QUERIES AND REPLIES.

Junior, H. Fa. Write to the Surgeon General of the Marine Hospital service, Washington, D. C., for the information you desire.

MARRIAGES.

PERCY—HARVEY.—On Wednesday, January 24, at Calvary Church, by the Right Rev. Horatio Potter, D. D., Bishop of New York, assisted by the Rev. H. Y. Satterlee, D. D., Professor Samuel R. Percy, M. D., and Miss L. Jennie Harvey.

SEYMOUR—MINTURN.—At Shoreham, Vermont, January 23, by the Rev. J. Isham Bliss, William Wotkins Seymour, M. D., of Troy, N. Y., and Frances, daughter of the late Lloyd Minturn.

DEATH.

BEARD.—At the Grand Hotel, New York city, January 23, Dr. George M. Beard, aged 43 years.